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[File 71] **ELSEVIER BIOBASE** 1994-2007/Aug W4
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Set	Items	Description
S1	2230295	S MOTOR? ? OR MOTORI?ED OR ENGINE? ? OR DRIVE OR DRIVES
S2	302041	S SPINDLE OR SPINDLES OR AXLE OR AXLES OR AXEL OR AXELS OR SHAFT? ? OR PINTLE? ?
S3	66528	S LOCK OR LOCKS OR LOCKING() (DEVICE? ? OR ELEMENT? ? OR INSTRUMENT? ? OR PIECE? ?)
S4	13216	S (LENGTHEN? OR SHORTEN? OR DISTRACTION? ?) (2N) (LEG OR LEGS OR LIMB OR LIMBS OR BONE OR BONES OR TIBIA? ? OR FEMORAL) OR OSTEOGEN?SIS()DISTRACTION? ? OR ILIZAROV()TECHNIQUE
S5	3283	S LINEAR()ACTUATOR? ?
S6	290	S S1 AND S2 AND S3
S7	0	S S4 AND S6
S8	7	S S5 AND S6
S9	3	RD (unique items)
S10	0	S S1 AND S3 AND S4
S11	257	S S1 AND S4
S12	452	S S2 AND S4
S13	10	S S3 AND S4
S14	7	RD (unique items)
S15	7	SORT S14/ALL/PY,A
S16	155	S S1(S)S4
S17	155	S S16 NOT (S8 OR S14)
S18	73	RD (unique items)

S19 15 S S18/2004:2005
S20 5 S S18/2006:2007
S21 53 S S18 NOT S19:S20
S22 4 S S2 AND S21
S23 49 S S21 NOT S22
S24 23 S S4/TI,DE AND S23
S25 23 SORT S24/ALL/PY,A
S26 217 S S1(S)S2(S)S3
S27 210 S S26 NOT (S8 OR S13 OR S22 OR S24)
S28 177 RD (unique items)
S29 60 S S2(5N)S3 AND S26
S30 40 RD (unique items)
S31 1 S S30/2004:2005
S32 5 S S30/2006:2007
S33 34 S S30 NOT S31:S32
S34 34 SORT S33/ALL/PY,A

9/7/1 (Item 1 from file: 6)

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NTIS

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NTIS

Accession Number: NTN86-0192

Hand-Held Power Clamp: Tool furnishes large pushing or pulling forces

(NTIS Tech Note)

National Aeronautics and Space Administration, Washington, DC.

Corporate Source Codes: 011249000

Feb 86 1p

Language: English

Journal Announcement: GRAI8610

FOR ADDITIONAL INFORMATION: Contact: NASA Technology Transfer Div., PO Box 8757 BWI Airport, MD 21240; (301) 621-0100 ext 241. For licensing information, contact: William Chmylak, Lyndon B. Johnson Space Center, Mail Code AL32, Houston, TX 77058; (713)483-3809. In either case refer to MSC-20549/TN.

NTIS Prices: Not available NTIS

Country of Publication: United States

This citation summarizes a one-page announcement of technology available for utilization. A new power clamp, originally designed to secure a payload aboard the Space Shuttle, can be operated with one hand to apply an opening or closing force of up to 1,000 lb. The clamp has potential applications as an end effector for industrial robots and in rescue work to push or pull wreckage with great force. The device includes two clamping blocks, two clamping plates, and a **motor-driven linear actuator** with a **self-locking screw shaft**. In addition, the clamp has a redundant manual lock and a handcrank for use if the actuator motor fails.

15/7/2 (Item 2 from file: 35)

Dissertation Abs Online

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01140984 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.

THE EFFECT OF DYNAMIC AXIAL FIXATION IN HEALING OF BONE LENGTHENING CALLUS

Original Title: EFECTOS DE LA DINAMIZACION AXIAL SOBRE LA CONSOLIDACION OSEA DEL CALLO DE ELONGACION

Author: AGUIRRE CANYADELL, MARIO

Degree: DR.

Year: 1990

Corporate Source/Institution: UNIVERSIDAD DE NAVARRA (SPAIN) (5864)

Source: Volume 5201C of Dissertations Abstracts International.

PAGE 78 . 173 PAGES

Language: SPANISH

Location of Reference Copy: FACULTY OF MEDICINE, UNIVERSITY OF NAVARRA, 31080 PAMPLONA, SPAIN

We have done an experimental study to determine the feasibility of axial compression using a monolateral external device, and its influence in the consolidation of a **lengthened bone** segment. For this study, 18 lambs with ages between 2-3 months and weighing 16 to 22 kilograms have been used as experimental animals. The **femoral diaphysis** was **lengthened** by 2 cms. After finishing the **lengthening** period, bone fragments were stabilized using a monolateral external device coupled to the biocompression apparatus (Howmedica rolling rod\$\sp{\rm R}\$). Animals were grouped according to the type of external immobilization previously established: Group "N" neutralization group with no axial movement permitted; Group "B" biocompression group with a free axial movement permitted; and Group "D" dynamic group which used a spring system to create an elastic movement. The results of the mechanical study showed that groups "N" and "B" did not register movements greater than 0.2 mm, in comparison to Group "D" with 2.0 mm. The radiological histological study showed that for Group "N", callus consolidation was incomplete at 6 weeks, and Group "D" was complete with a hypertrophic callus.

Our conclusions show that a monolateral external device, coupled to an apparatus with ball-bearings and a **locking device** to prevent collapse, can permit elastic dynamic motion without collapse of the bone fragments. Besides, this dynamic motion has a positive effect in callus formation by producing its hypertrophy with faster and earlier appearance of normal bone structure.

15/7/3 (Item 3 from file: 155)

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MEDLINE(R)

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09507605 PMID: 1480972

[Treatment of chronic osteitis of the femur]

Die Behandlung der chronischen Osteitis am Oberschenkel.

Schmidt H G; Wittek F; Faschingbauer M; Fink B

Abteilung für Unfall- und Wiederherstellungschirurgie, Berufsgenossenschaftliches Unfallkrankenhaus Hamburg.

Der Unfallchirurg (GERMANY) Nov 1992 , 95 (11) p562-5 , ISSN: 0177-5537--Print
Journal Code: 8502736

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: GERMAN

Main Citation Owner: NLM

Record type: MEDLINE; Completed

Since May 1990, we have treated seven patients with chronic osteomyelitis of the femur. The **Ilizarov apparatus** was used in three of these cases for fixation and in four cases for segment transport. The treatment of four patients is now complete. We have not found any problems in bone regeneration. The use of pins in the proximal and middle thirds of the femur has proved problematic due to the soft tissue damage. Instead of this, we recommend using Schanz screws, which can be fixed to the arch with the **AO lock**. Moreover, it is easier to shorten the 180 degrees arch to 90 degrees or 120 degrees using the Schanz screws. To prevent problems, it is better to assemble the apparatus before use and to take into consideration the anatomical and functional situation.

Record Date Created: 19930205

Record Date Completed: 19930205

15/7/4 (Item 4 from file: 155)

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09572977 PMID: 1342655

[A nail for progressive lengthening. An animal experiment with a 2-year follow-up]

Clou d'allongement progressif. Experimentation animale avec un recul de deux ans.

Guichet J M; Grammont P M; Trouilloud P

Service d'Orthopedie, CHU Dijon.

Chirurgie; memoires de l'Academie de chirurgie (FRANCE) 1992 , 118 (6-7) p405-10 ,

ISSN: 0001-4001--Print Journal Code: 0236600

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

The elongation nail was experimented on 10 pure-breed Romanov ewes aged 9 to 12 month-old. It was implanted in a randomly chosen femur, the other femur being used as a control. After a superior and lateral approach to the femur, drilling and initial distraction averaging 26 mm, the nail was inserted and locked at both ends. Lengthening began at D1 by alternate inward and outward rotation maneuvers exerted on the pelvic limb. One ewe presented an intraoperative hip dislocation, another one unlocked the upper lock, with secondary shortening. The other 8 ewes underwent successful lengthening without apparently suffering (63-mm gain, i.e. 37% at the end of lengthening). Two ewes died at 9 months and their femura presented with a space remaining to fill smaller than 3 mm. Five of the other 6 ewes were followed up for an average of 10 months after bone healing and nail removal, over a total follow-up of 2 years. The femur is modified all over its diaphysis and widened at the level of the regenerated tissue, where cortical bone is thinner but has a normal lamellar appearance. Bone marrow is replaced by trabecular bone filled with fatty marrow. The pathology study of the last of the 6 ewes followed up for 2 years showed a bridge between both sites of incipient regeneration, indicating bone healing. The final gain as compared to the non-operated side is 27%. Progressive lengthening can be performed with an internal fixator in animals. The clinical trial in progress with allow evaluating this technique and establishing its field of application.

Record Date Created: 19940216

Record Date Completed: 19940216

15/7/7 (Item 7 from file: 73)

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10789809 EMBASE No: 2000270104

Management of supracondylar fractures of the femur with the distal femoral nail (DFN) - A prospective study

OPERATIVE VERSORGUNG DISTALER FEMURFRAKTUREN MIT DEM DISTALEN FEMURNAGEL (DFN) - EINE PROSPEKTIVE STUDIE

Grass R.; Biewener A.; Herzmann K.; Wagner R.; Zwipp H.

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Author Email: rgrass@Resl.urz.tu-dresden.de

Acta Chirurgica Austriaca (ACTA CHIR. AUSTRIACA) (Austria) 2000 , 32/SUPPL. 161 (52-55)

CODEN: ACAUB ISSN: 0001-544X

Document Type: Journal ; Article

Language: GERMAN Summary Language: GERMAN; ENGLISH

Number Of References: 10

Background: The standard fixation method for extra-articular and complete articular

fractures of the distal femur is the condylar blade plate. Our biomechanical tests prove that the fixation stability of the Distal Femoral Nail DFN, a solid unreamed Titanium nail, inserted retrograde through the intercondylar notch of the knee with two different distal interlocking options, is superior to the gold standard condylar blade plate. The objective of this prospective study was to examine fracture reduction, fracture consolidation and clinical outcome using retrograde intramedullary nailing of distal femur fractures treated with the DFN. Methods: Between November 1997 and March 1999, 74 distal femoral fractures were treated with the DFN. The fracture patterns were classified according to the AO classification. Except for reduction of the articular fracture (type C-fractures, small medial approach and ORIF), closed reduction of the supra condylar fracture was performed in every case. Goniometric measurements were made on the AP radiograph to determine varus or valgus angulation and on the lateral radiograph to determine flexion or extension angulation. Mal union was defined as **leg-shortening** of more than 10 mm and a varus or valgus angle exceeding five degrees or flexion or extension deformity of more than ten degrees. A follow up was done at 24 weeks. The patient population consisted of 36 females and 37 males with a mean age of 52 years (17-96). 23 (32%) patients were polytraumatized (ISS = 28). Respecting the AO-classification there were 50% extra-articular type A- and 33% complete articular type C-fractures and 17% femoral shaft fractures, 23 (32%) were open fractures (IOII 22%, IOIII 11%). The average interval between accident and surgery was 2.3 days. Average duration of surgery for type A-fractures was 79 min (30-210), for type C-fractures 118 min (55-210). Results: **Leg-shortening** greater than 15 mm was observed in 8%, a varus or valgus angle exceeding 5 degrees or flexion or extension of more than 10 degrees was found in 15%. At follow up a painfree full weight bearing was obtained in 84%. An extension deficit of 10 degrees was observed in 4 patients, average knee flexion was found to be 110degree. As shown by follow-up radiographs all fractures were consolidated. No primary and secondary cancellous bone graft was performed. Initial postoperative fracture reduction was maintained in all except one patients until union (one patient had complete loss of reduction). Complications included loosening of distal **locking device** in 8%, infection in one patient and one broken nail. According to Neer's scoring system the results were excellent in 88% good and very good results. Conclusions: Vascularity and appropriate mechanical implant stability are the main factors in bone healing. The reduction technique and the choice of implant are the determining factors for fracture consolidation. Using a microinvasive closed approach to protect the vascularity of the supracondylar fracture zone the DFN allows a biological osteosynthesis of distal femoral fractures. Compared to the condylar blade plate the DFN in mechanical testing shows significantly greater stiffness and strength when axial loading is performed. The lack of appropriate axial stability is of clinical importance in cases when stable medial buttressing is not available. Lack of appropriate axial stability of the implant and non-biological open operative technique could explain the high incidence of non- or delayed union and infection of the gold standard condylar blade plate. In our study closed reduction of supracondylar fracture and no primary or secondary bone grafting was performed. The fact that no delayed unions, non-unions, an a very slight infection or loss-of-primary-reduction-rate were found, seems to confirm that the DFN possesses the required mechanical stability. As shown by prior biomechanical testing the spiral blade **locking** option in comparison with the **locking** screws has 40% more stiffness and 20% more yield-strength. Therefore the spiral blade **locking** option should be used to stabilize osteoporotic fractures and/or in presence of a multifragmentary metaphyseal fracture zone. The experimental and clinical results lead to the conclusion that the DFN is highly recommended for the treatment of type A.xy- and type C1- and type C2- supracondylar femur fractures.

22/7/2 (Item 2 from file: 155)

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10350039 PMID: 7746931

[Humeral lengthening after replantation of the upper limb]

Allongement de l'humerus apres reimplantation du membre superieur.

Pascarel X; Peres J M; Le Clouerec G

Service d'Orthopedie-Traumatologie, Hopital Pellegrin Tripode, Bordeaux.

Revue de chirurgie orthopedique et reparatrice de l'appareil moteur (FRANCE) 1994 ,

80 (5) p450-3 , ISSN: 0035-1040--Print Journal Code: 1272427

Publishing Model Print

Document type: Case Reports; English Abstract; Journal Article

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

INTRODUCTION: The authors have applied the method of progressive **lengthening** to correct upper limb discrepancy resulting from arm reimplantation in a young female adult.

MATERIAL: Following a motor vehicle accident, a twenty one years old female had her right arm sectioned. Four hours after the accident, the limb was reimplanted with 10 cm shortening of the humeral shaft, to allow direct nerve suture. Sixteen months later, she had excellent functional recovery, but was annoyed by the aesthetic appearance of her short arm. Humeral **lengthening** was undertaken. METHOD: The authors used a special external fixation device Orthofix (Verona, Italy) and a proximal corticotomy was performed. RESULT: Progressive callus distraction allowed 10 cm lengthening without any loss of function in 10 months; aesthetic appearance was greatly improved. DISCUSSION: Limb reimplantation necessitates substantial **bone shortening** to protect soft tissue sutures. Functional recovery and aesthetic tolerance are classically good but in this case, aesthetic tolerance was poor. The progressive humeral lengthening was uneventful and allowed excellent outcome, in this young girl, despite distraction of the sutured nerve. CONCLUSION: This technique should be used prudently.

Record Date Created: 19950615

Record Date Completed: 19950615

22/7/3 (Item 1 from file: 5)

Fulltext available through: [ScienceDirect](#)

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16167084 Biosis No.: 200100338923

Distraction device for moving apart two bone sections

Author: Betz Augustin (Reprint); Butsch Michael

Author Address: Constance, Germany**Germany

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1247

(2): June 12, 2001 2001

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: The invention concerns a **distraction** device for moving apart two **bone** sections, in particular for extending bones or bridging a gap in a bone, the device comprising an intramedullary nail (1) which can be introduced into the medullary space of a bone and comprises two parts (2, 3) which can be moved axially and can each be secured to one of the two bone sections. The distraction device further comprises a **drive** unit (4) that **drives** a **drive shaft** (16), and a device for converting the rotational movement of the **drive shaft** (16) into a relative axial movement of the two parts (2, 3) of the intramedullary nail (1). In order to increase operational reliability and reduce the overall size of the device while retaining the high degree of efficiency, the **drive shaft** (16) **drives** planetary rollers (19) which are held on orbits on which they engage by means of **drive** grooves (21) provided on their outer periphery in corresponding **drive** grooves

(8) in a hollow body (7) surrounding the planetary rollers (19), at least the **drive** grooves (8) of the hollow body (7) or of the planetary rollers (19) being designed as threaded grooves in order to displace the hollow body (7) axially relative to the **drive** shaft (16) when the latter is rotated.

22/7/4 (Item 2 from file: 5)

Fulltext available through: ScienceDirect

Biosis Previews(R)

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16029009 Biosis No.: 200100200848

Apparatus for internal mandibular distraction

Author: Landsberger Samuel E (Reprint)

Author Address: Redondo Beach, CA, USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1238

(1): Sep. 5, 2000 2000

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: Devices for **lengthening bone**, particularly the mandible and other small bones, by **distraction** osteogenesis are presented. The devices are implantable in an appropriate surgical procedure, and provide for an optional flexible **drive shaft**, used to transmit controlled torque for elongation of the devices thereby effecting distraction osteogenesis, which optional flexible **drive shaft** may conveniently terminate within the oral or buccal cavity. In one embodiment, the devices provide a telescoping screw assembly and **drive** means, which **drive** means may be an angled gear **drive**. In another embodiment, a threaded flexible **drive shaft** is provided which provides for elongation of the devices thereby effecting distraction osteogenesis.

25/7/1 (Item 1 from file: 155)

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04478585 PMID: 864215

Lengthening of the ulna in radial agenesis: a preliminary report

Dick H M; Petzoldt R L; Bowers W R; Rennie W R

Journal of hand surgery (UNITED STATES) May 1977 , 2 (3) p175-8 , ISSN: 0363-5023-

-Print Journal Code: 7609631

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In two patients with bilateral radial agenesis, the **ulnas** were divided and **lengthened** in a modified Abbott-Anderson device with a gear box controlled by an electric **motor** to obtain from one to 2 mm. per day of gradual distraction. Three centimeters of length was achieved in 3 weeks. Bone bridged the gap in 3 months and was mature in 6 months. Repeat osteotomy and lengthening was done 12 to 18 months later. All secondary **lengthening** operations required **bone** grafts. Total length gained ranged from 5.4 to 6.4 cm.

Record Date Created: 19770723

Record Date Completed: 19770723

25/7/2 (Item 2 from file: 155)

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06423865 PMID: 6727624
[Implantable devices for lengthening the femur without external drive mechanisms]
Implantiruemye apparaty dlia udlineniia bedra bez vneshnykh privodov.
Bliskunov A I
Meditsinskaia tekhnika (USSR) Mar-Apr 1984 , (2) p44-9 , ISSN: 0025-8075--Print
Journal Code: 1305457
Publishing Model Print
Document type: English Abstract; Journal Article
Languages: RUSSIAN
Main Citation Owner: NLM
Record type: MEDLINE; Completed
A distractor is proposed enabling the utilization of an internal supporting point to actuate a lengthening mechanism and to perform the distraction simultaneously with bone fragment fixation. With the device, a long-term skin perforation is avoided, and there is no need in external drives as well. The distractor is mounted inside the bone by means of a special auxiliary device to provide the aiming boring of the femoral bone.
Record Date Created: 19840718
Record Date Completed: 19840718

25/7/5 (Item 5 from file: 155)

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MEDLINE(R)
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08630303 PMID: 2226033
[First fully implantable intramedullary system for callus distraction--intramedullary nail with programmable drive for leg lengthening and segment displacement. Principles and initial clinical results]
Erstes voll implantierbares intramedullares System zur Callusdistraction--Marknagel mit programmierbarem Antrieb zur Beinverlangerung und Segmentverschiebung. Grundlagen und erste klinische Ergebnisse.
Betz A; Baumgart R; Schweiberer L
Chirurgische Klinik und Poliklinik, Ludwig-Maximilians-Universitat Munchen, Klinikum Innenstadt.
Der Chirurg; Zeitschrift fur alle Gebiete der operativen Medizen (GERMANY) Aug 1990 , 61 (8) p605-9 , ISSN: 0009-4722--Print Journal Code: 16140410R
Publishing Model Print
Document type: Journal Article
Languages: GERMAN
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Record Date Created: 19901207
Record Date Completed: 19901207

25/7/8 (Item 8 from file: 155)

Fulltext available through: USPTO Full Text Retrieval Options
MEDLINE(R)
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10354134 PMID: 7784649
[Upper metaphyseal lengthening of the tibia. Report of 57 cases in children and adolescents]
Allongement metaphysaire superieur du tibia. 57 cas effectues par la methode du callotasis chez l'enfant et l'adolescent.

Pouliquen J C; Glorion C; Ceolin J L; Langlais J; Pauthier F
Service d'Orthopedie et Traumatologie Pediatriques, Faculte de Medecine Paris-Ouest,
Universite Paris V Rene Descartes, Hopital R Poincare, Garches, France.
Revue de chirurgie orthopedique et reparatrice de l'appareil moteur (FRANCE) 1994 ,
80 (6) p532-41 , ISSN: 0035-1040--Print Journal Code: 1272427

Publishing Model Print

Document type: English Abstract; Journal Article

Languages: FRENCH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

INTRODUCTION: The authors reviewed 57 upper metaphyseal **lengthenings of the tibia**. They especially studied complications in order to evaluate this method. MATERIAL AND METHODS: Fifty seven **tibial lengthenings** in 47 children and adolescents were reviewed. All lengthenings were performed according to the callotasis technique, using Judet's lengthener in the first 15 cases, the, OF-Garches Orthofix in 42 cases. All the callotasis principles were applied: delayed elongation, 1 mm per day distraction, one month neutralization after elongation period, then dynamization before removing the apparatus. Particularities were: a) metaphyseal osteotomy of the upper tibia, b) screw fixation and osteotomy of the fibula, c) classical dynamization according to De Bastiani and Aldegheri in 29 cases, dynamization by a silastic collar (OF-Dyna-Ring) in 28 cases. METHODS: Severity of complications was classified according to Caton: none, benign, serious (needed reoperation or reanesthesia) and severe (sequel). Complications and rate of lengthenings without complication or with benign complications were studied relative to etiology, age, amount of lengthening and the stage of program in which they occurred. A table summarizes data of all the lengthenings. RESULTS: Lengthening was 52.3 mm in average. Healing time (number of days to lengthen and to fuse the bone divided by the number of lengthened centimeter) was 40 in average (range: 20-105): it was 45.6 days per cm when using classical dynamization and only 34.3 with silastic collar dynamization ($p = 0.002$). Total of complications was 59 out of 57 lengthenings. 21 complications were benign, 37 serious and 1 severe (partial motor palsy of the foot). Thirty two (56 per cent) lengthenings were performed without unforeseen procedure or anesthesia. There were 4 intra-operative complications: 1 vascular lesion, 1 incomplete osteotomy and 2 malpositioned half screws. Complications of elongation period were the most numerous, 4 transient palsies, 6 knee contractures (2 led to a supracondylar fracture), 6 equinism (4 needed an Achilles tendon lengthening), 12 valgus deviations in which 9 were realigned using OF-Garches fixator without reoperation, 1 serious depression occurred in a bilateral lengthening. Consolidation was achieved without complication in 52 cases. Complications were: 1 refracture (fourth lengthening of the same tibia), 1 delayed union, 1 non-union, 2 late deviations. DISCUSSION: Rate of nervous and joint complications is close to that of other series. However, a high osteotomy decreases the consequences on the foot without increasing knee contracture in flexion. The ability to realign during the elongation period appears to be a prevention of valgus deformity compared to Wagner's technique. The authors's distractor is better tolerated than Ilizarov's. Problems with consolidation are rare, less than 9 per cent of the cases. CONCLUSION: A modular distractor improves the results of **tibial lengthening**; realignment is possible before, during or after the elongation. OF-Orthofix is easy to apply and well-tolerated by the patient, especially in bilateral lengthenings. Performing a high osteotomy, the callus is thick and the consolidation is quickly achieved and safe. A well-thought dynamization using Orthofix Dyna-Ring decreases the treatment time which is 35 days per centimeter in average.

Record Date Created: 19950718

Record Date Completed: 19950718

25/7/13 (Item 13 from file: 155)

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MEDLINE(R)

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11509394 PMID: 9345218

A fully implantable motorized intramedullary nail for limb lengthening and bone transport.

Baumgart R; Betz A; Schweiberer L

Ludwig-Maximilians-University, Klinikum Innenstadt, Munich, Germany.

Clinical orthopaedics and related research (UNITED STATES) Oct 1997 , (343) p135-43

, ISSN: 0009-921X--Print Journal Code: 0075674

Publishing Model Print

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

This article describes an intramedullary nail that contains a fully implantable motorized programmable sliding mechanism for limb lengthening and bone transport that reduces the risk of infection, discomfort, and scarring usually associated with the external fixators used for the same purpose. Twelve patients were treated surgically with the new system. Eleven patients had unilateral femur shortening between 3 and 7.5 cm, and one patient had a 12-cm defect after tumor resection. In all patients with femur shortening the leg length discrepancy was corrected completely. In the case of bone defect the segment transport worked well without any problems. There was no infection and no axial deformity. Immediately after chemotherapy, delayed bone formation was seen. In two early cases of limb lengthening a technical problem led to replacement of the motor.

Record Date Created: 19971119

Record Date Completed: 19971119

25/7/15 (Item 15 from file: 285)

BioBusiness(R)

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00963949

Implantable bone lengthening apparatus using a drive gear mechanism: US PATENT-5704938.

Jan. 6, 1998.

Staehlin J H; Segal G I; King D; Rubley G; Paley D

Lutherville, Md., USA.

Official Gazette of the United States Patent and Trademark Office Patents Vol.1206,
No.1, Jan. 6, p.316, 1998.

Patent Number: US 5704938 Patent Date: January 6, 1998 (19980106)

Patent Classification Code: 606062000

25/7/16 (Item 16 from file: 5)

Fulltext available through: USPTO Full Text Retrieval Options

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16508961 Biosis No.: 200200102472

Implantable bone lengthening apparatus using a drive gear mechanism

Author: Staehlin J H; Segal G I; King D; Rubley G; Paley D

Author Address: Lutherville, Md., USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1206
(1): p 316 Jan. 6, 1998 1998

Medium: print

ISSN: 0098-1133

Document Type: Patent

Record Type: Citation

Language: English

25/7/17 (Item 17 from file: 5)

Fulltext available through: ScienceDirect

Biosis Previews(R)

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15567901 Biosis No.: 200000286214

Apparatus and method for distraction osteogenesis of small alveolar bone

Author: Chin Martin (Reprint)

Author Address: 20 Hampton Ct., Alameda, CA, USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1228
(1): Nov. 2, 1999 1999

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: An apparatus and method for osteogenesis **distraction** of small alveolar bone is provided. The alveolar **distraction** osteogenesis device may be affixed to small and thin bone segments. An alveolar distraction osteogenesis device according to the first embodiment includes a submergible first and second members along with a **threaded rod**. An alveolar distraction osteogenesis device according to a second embodiment includes an osseointegrated cylindrical member along with an adaptable threaded rod which may be used with a stabilizing plate. The alveolar distraction osteogenesis device is activated using a hexagonal **drive** wrench or a slot screw **driver**. In order to allow for bone growth and/or distraction, a constant activation rate between bone segments is applied by a torque.

25/7/19 (Item 19 from file: 155)

Fulltext available through: USPTO Full Text Retrieval Options

MEDLINE(R)

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13539898 PMID: 11812486

The intramedullary skeletal kinetic distractor (ISKD): first clinical results of a new intramedullary nail for lengthening of the femur and tibia.

Cole J D; Justin D; Kasparis T; DeVlugt D; Knobloch C

Injury (England) Dec 2001 , 32 Suppl 4 pSD129-39 , ISSN: 0020-1383--Print

Journal Code: 0226040

Publishing Model Print

Document type: Clinical Trial; Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: MEDLINE; Completed

In 1986, a programme was initiated by the senior author to develop a reliable, mechanically activated, **intramedullary lengthening device** with a non-invasive means of measuring the progress of lengthening without X-ray. We report results of design, biomechanical testing, in vivo animal testing and clinical implantation of the first 20 intramedullary skeletal kinetic **distractors** (ISKDs) in adult patients with **limb-length** discrepancies. Twenty ISKD devices were implanted in 18 patients (14 males and four females). Lengthening was required due to infection (ten), trauma (six), polio (one) and burn (one). Six femurs and 14 tibias were lengthened. Mean patient age was 40 years (range, 18-65 years). No implant related infections, non-unions, malunions or joint contractures were observed. A design change was made following two initial hardware failures, after which there were no further breakages. Average lengthening was 49 mm (range, 29-110 mm). The average lengthening rate was 0.82 mm/day (range, 1.7-0.4 mm/day). Ability to work, walk and drive before, during and after treatment with the ISKD compared favourably with that of similar patients undergoing lengthening using the 'monorail' method in our practice. The ISKD appears to be a safe and cost-effective alternative to

external fixators that reduces lifestyle disruption and complications during adult limb-lengthening procedures.

Record Date Created: 20020307

Record Date Completed: 20030507

25/7/20 (Item 20 from file: 5)

Fulltext available through: ScienceDirect

Biosis Previews(R)

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16740910 Biosis No.: 200200334421

Medullary nail for the distraction of bones

Author: Baumgart Rainer (Reprint)

Author Address: Schieggstrasse 26, 81479 Muenchen, Germany**Germany

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1258

(1): May 7, 2002 2002

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: The medullary nail (10) for **bone distraction** has an electric **motor drive** (20) that is located in its interior (11), preferably in its interior (11) in the area of its tip (12), and is connected with a reception antenna (32) for feeding energy via an electrical connection (31). The reception antenna (32) and the electrical connection (31) are located entirely in the interior (11) of the medullary nail (10). The medullary nail (10) is equipped with an orifice (14), which faces the reception antenna (32) and allows the feeding of energy.

34/7/1 (Item 1 from file: 2)

Fulltext available through: ScienceDirect

INSPEC

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0000102328 INSPEC Abstract Number: 1899A00905

Title: Electrically operated drawbridge

Author Kidde, W.

Journal: Electricity 15 p. 295

Publication Date: 1898 Country of Publication: USA

Language: English Document Type: Journal Paper (JP)

Abstract: Since February, 1898, a 450-ton drawbridge over the Passaic River at Newark, N.Y., has been successfully operated electrically. The contractors were required to furnish power (from a 500 volt direct circuit) which would open or close the bridge in thirty seconds, this power not to be available until the wedges and **locking device** had been withdrawn; also the wedging and closing devices must be automatically cut off, so that they could not be used till the bridge is closed. These conditions have been successfully met, and the bridge operated by three unskilled men on their regular trips. Two cables are carried under the bed of the river up through the centre pin of the bridge into a contact commutator under the roadway. The commutator has two parts, the lower consisting of a copper ring and central disc attached to, but insulated from, the stationary centre bridge pin. Over this is the heavy circular part which moves with the draw and carries on a diameter three insulated contact shoes, two of which are respectively held in contact with the ring and disc on the stationary part, and thus establish a lead and return to the **motor-room** above. The third shoe only touches the lower ring when the bridge is closed, and breaks contact by means of quick acting springs directly the bridge begins to open; the circuit through this shoe and the centre disc **drives the motor** when operating the wedge **shaft**. The **motor -room** contains one **motor** with

extended **shaft** to carry several clutches and gears. The first is the spur-wheel driving the line **shaft** which operates the bridge, and is mounted on a friction clutch. Another clutch is attached by a sprocket-wheel and chain to the **shaft** for the **locking devices** and wedges. These two clutches are worked alternatively by a common lever, which also makes the requisite electrical connections. In mid-position neither clutch is in use. The position of the wedges is indicated on a disc by a mechanism which also automatically interposes a latch bar in the arc of the clutch lever, so that the bridge cannot be turned until the wedges have been withdrawn. An air-pump, connected to the **motor-shaft** by iron link belting, maintains 40 lb. pressure in a receiver for a signal whistle. The speed and direction of rotation of the **motor** are governed by a reversible controller, which regulates the speed with the different loads due to operating pump, wedges, and bridge. This controller and the clutch-lever are worked from a position overlooking the river. The drawbridge structure is 720 feet long, while the draw proper is 227 feet in length and 67 feet wide. The moving span weighs 450 tons. The author suggests that the score of bridges close to one another over the Harlem River in N.Y. City should be electrically operated from one central plant radiating power which would precede a ship in its passage through the successive draws. **Subfile: B**

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34/7/2 (Item 2 from file: 2)

Fulltext available through: [ScienceDirect](#)

INSPEC

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0000137753 **INSPEC Abstract Number:** 1909B01158

Title: Electrification of Ferndale collieries

Author Patchell, W.H.

Journal: Electrical Engineering 44 p. 567-574

Publication Date: 22 Oct. 1909 **Country of Publication:** UK

Additional Citations: The Electrician 64 96-98 29 Oct. 1909 UK ; The Electrician 143-146 5 Nov. 1909 UK

Language: English **Document Type:** Journal Paper (JP)

Abstract: The Ferndale Collieries comprise 9 pits. Power is distributed to the various pits by means of a high-tension 3-phase system from a power-house generating at 2,200 to 2,500 volts and 25 ~, the more distant pits being supplied at 6,600 volts through step-up transformers at the generating station. The magnitude of the undertaking is shown by the following table:- Table omitted. The main switchgear situated beneath the operating gallery is hand operated by rods and levers running up to the generator panels, which are in the form of desks. Each main switch is provided with an overload and reverse-current relay. The generator and feeder bus-bars are connected together at the two ends by two main-meters which record the whole output of the station; and links enable any feeder or generator to be isolated without affecting the continuity of running. The feeder oil-switches are connected by levers to feeder pillars immediately above them on the operating gallery. The distribution system is partly overhead and partly by insulated cable where the runs are short. Bitumen or paper-insulated cables with **lock**-coil armouring run down the **shafts** and terminate at oil-switches in switch-rooms at the pit bottoms. The feeder cables to the various haulages and pumps are armoured with a double layer of steel tape, and in most cases convey power at 2,200 volts. The **motor** controllers, designed by the author, consist of drums of insulating material with spirally arranged contact **blocks**, which, together with the contact fingers, are immersed in oil. The reversing switch is mechanically interlocked with the controlling drum to prevent reversal with the rotor on short-circuit. The resistances are cooled by oil which, to be cooled, is pumped through external radiators. The **motors** are enclosed with "plate-protected" ventilating holes. From experiments on a straight track the author gives the tractive effort necessary, on a level, for the trams as 67 lbs. per ton. This corresponds with a coefficient of friction of 0.03. The electric **drive** of the ventilating fans was in the first instance carried out with "cascade" speed variation, but the author

states that, owing to the variation of the power of a fan with the cube of the speed, control by varying rotor resistance is economical, and was adopted in the later fan equipments. Electric winding by the Ilgner system was adopted for No. 9 pit. The winding drum is 16 ft. in diam., with a 9-ft. oak-lagged tread, and a tail rope is used to equalise the weight of the main rope. The flywheel weighs 30 tons, is 12 ft. in diam., and is coupled magnetically to the 3-phase motor-generator set of 700-h.p. output. The generator gives direct current at pressures up to 220 volts to the two winding motors. A Foucault magnetic brake enables the flywheel to be stopped in 7 minutes in cases of emergency. The generator and motors are separately excited by a small motor-generator. The operation of winding is safeguarded by automatic checking of the speed and duration of wind. The power station supplies 9,000,000 units per annum, the cost per unit delivered being 0.482d., of which 0.210d. is for works costs and coal (at 5s. 8d. per ton), and 0.272d. the interest and depreciation allowance. The paper contains many interesting tables and illustrations.

Note: Abstract of paper read before the South Wales Inst. of Engineers, Oct., 1909. [See also Abstract No. 1909B00067 **Subfile:** B
Copyright 2004, IEE

34/7/3 (Item 3 from file: 2)

Fulltext available through: [ScienceDirect](#)

INSPEC

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0000149942 **INSPEC Abstract Number:** 1913B00918

Title: Oscillating motor meter for direct current

Journal: Elektrotechnische Zeitschrift ETZ 34 p. 853-854

Publication Date: 24 July 1913 **Country of Publication:** Germany

Language: English **Document Type:** Journal Paper (JP)

Abstract: The new A.E.G. type GG1 oscillating motor meter for heavy direct currents differs from the 1909 type GG in range and construction. The new meter is built for use in 3- or 8-wire d.c. circuits up to 600 or 1000 volts according to the series resistance employed in the pressure circuit. For currents above 8000 amps, and up to 10,000 amps, the meter is built only for 2-wire circuits. The 3000-amp. meter has a circular, and the 6000-amp. meter a rectangular base-plate of cast zinc; in the 10,000-amp. meter the baseplate is of cast brass. The main current coil is of sheet copper insulated with cotton or oiled paper in meters up to 800 amps, rating; the amp.-turns vary from 1600 to 3000. In larger meters the current coil consists of bent copper bar or of specially formed copper blocks. In meters up to 3000 amps, rating the winding plane of the main current coil is perpendicular to the base-plate, but in larger meters the pieces carrying the main current lie parallel to the base-plate (see Fig.), so that the main-current field is perpendicular to the latter. The shunt circuit comprises the moving coil, the shunt and series resistances, the change-over, and the auxiliary coils; the total resistance is such that the current flowing under normal pressure is 11 to 16 milliamps. In the smaller meters one of the moving coils lies in the centre of the main field, the other below the main current coils; in the larger type one moving coil is above and the other below the main current-carrying copper. The moving coils are wound with 0.07 mm. diam. silk-covered copper, and contain from 600 to 1500 turns. The two braking magnets are below the main current coils, and are entirely enclosed in a sheet-iron case in meters rated above 3000 amps. The braking disc is 115 mm. in diam., and is 0.8 and 1.0 mm. in thickness in meters up to and above 8000 amps, rating respectively. The change-over and recording trains may be mounted in a separate case to which four shunt-current leads must then be carried from the meter. A locking device is provided for the armature spindle in the largest sizes of the meter. The connections and terminal markings of the meter are explained in the original. Although the armature coil is of astatic construction, the meter leads should be carried vertically downwards for at least 1 m. from the terminals, since the meter is calibrated under such conditions and the astatic arrangement is of course only unaffected by uniform fields. For the same reason other

heavy current-carrying leads should not be placed near the meter. The meter tested by the Reichsanstalt started at 1% of full load, and exerted 2.8 gm.-cm. average torque. The shunt-circuit loss was 3 and 7 watts in 220- and 600-volt meters respectively; in the main-current circuit the loss at full-load was 16 and 101 watts respectively in 150- and 6000-amp. meters. In calibrating these meters, after leaving the shunt circuit connected to the supply for 30 min., the arc of swing of the armature is adjusted so that, at 60% of rated current, the meter indication is about 1% too great. The current being then reduced to 6 or 10% of the rated load, the meter is finally adjusted by aid of the auxiliary coils which are movable in the neighborhood of the moving coils.

Note: Communication from the Physikal.-Techn. Reichsanstalt **Subfile:** B

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34/7/4 (Item 4 from file: 8)

Fulltext available through: [ScienceDirect](#)

Ei Compendex(R)

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0000296582 E.I. No: 19270009515

Title: Bilton improved pro-ducto-matic .

Author: Anon

Source: Machinery (New York) v 34 n 3 Nov 1927 (New York, NY United States), p 242-243, 2 Figs.

Publication Year: 1927

Language: English

Document Type: JA; (Journal Article)

Abstract: Changes, which include universal turret, automatic work-locking device, quick-changing cutter spindle, reversing drive , and changeable cams, are claimed to take machine out of special-purpose class and give it as wide range of use as automatic milling machine. (See also Am. Mach., vol. 67, no. 16, Oct. 20, 1927, p. 635, 2 figs.)

34/7/7 (Item 7 from file: 2)

Fulltext available through: [ScienceDirect](#)

INSPEC

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0000879636 INSPEC Abstract Number: 1967C00367

Title: A simply-controlled 2-speed drive system

Author: Druce, G.

Journal: Machinery and Production Engineering 109 p. 857-858

Publication Date: 19 Oct. 1966 **Country of Publication:** UK

Language: English **Document Type:** Journal Paper (JP)

Abstract: The drive system described comprises two epicyclic geartrains the planet gears of which drive internal gears, the internal gear of one train acting as the planet carrier of the other. This internal gear forms the inner member of a roller clutch, the outer member of which is fixed. The other internal gear normally runs freely, and the clutch then locks, so that the output shaft runs at a slow speed. When this latter internal gear is locked, the clutch freewheels and the output shaft rotates at high speed. **Subfile:** C

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34/7/8 (Item 8 from file: 23)

Fulltext available through: [ScienceDirect](#)

CSA Technology Research Database

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0000559073 IP Accession No: 01730733-0140P

Autoclave Casting Vessel - With Lid Interlock and Stopper Connection for Excess Pressures

Gennokh, E E; Belousov, N N; Zayats, A L

Publication Date: 1968

, Soviet

Document Type:

Patent

Record Type: Abstract

File Segment: Aluminium Industry Abstracts

Abstract:

Autoclave casting vessel for Al, Mg, etc, for large casting jobs applies excess pressure at metal retention stage prior to pouring, during pouring and during solidification. The vessel lid is fitted with an interlocking device formed from a spring-loaded pusher coupled via toggle to the similarly sprung stopper for the lid. The rapid-release connection for the stopper is a fork which is mounted on the lid drive and engages the stopper shaft for actuation purposes. The main lid is powered by a motor while the stopper lifter drive is placed on the throat lid and the drive rod mounts the fork which engages the stopper shaft in the rapid release or lock operation. The interlock is mounted on the main lid and employs a bolt to lock the lid down when the autoclave is pressurized. A sprung pusher is employed to drive the bolt home into the lid once required pressure has been established in the autoclave chamber containing the mold car.-DCPI.

34/7/11 (Item 11 from file: 8)

Fulltext available through: ScienceDirect

Ei Compendex(R)

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04088865 E.I. Monthly No: EI8201008407 E.I. Yearly No: EI82109359

Title: DRIVE TRAIN ASSEMBLY OF THE SWEDISH WTS 3.

Author: Byggeth, N. G.; Hallsten, K. E.; Thorenson, L.

Corporate Source: Karlskronavarvet, Swed

Source: Pap Presented at the Int Symp on Wind Energy Syst, 3rd, Lyngby, Copenhagen, Den, Aug 26-29 1980 Publ by BHRA Fluid Eng, Cranfield, Bedford, Engl, 1980 Pap E3, p 253-267

Publication Year: 1980

Language: ENGLISH

Journal Announcement: 8201

Abstract: This paper gives in a short introduction a general overview of the Swedish WTS 3 (Wind Turbine System 3 MW). An elaborated description of the complete Drive Train Assembly of the WTS 3 is given. The teetering device, the connection between the hub and the low speed shaft, the low speed shaft and its bearings, the rotor lock, the parking brake, the connection between the low speed shaft and the gear box, the gear box and its torsionally " soft shaft " mounting to the bedplate, the high speed shaft, its flexible coupling and its extension coupling, the inching device, the over torque safety device, the generator, the electric slipring assembly and the hydraulic transfer bearing are all discussed to its function and design.

34/7/13 (Item 13 from file: 2)

Fulltext available through: USPTO Full Text Retrieval Options

INSPEC

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02906556 INSPEC Abstract Number: C82033404

Title: Rotating device for the multipositional assembly head of a robot

Author: Povaibo, A.G.; Zin'ko, S.B.

Journal: Mekhanizatsiya i Avtomatizatsiya Proizvodstva no.4 p. 14

Publication Date: 1982 **Country of Publication:** USSR

CODEN: MAVPAC **ISSN:** 0025-8873

Language: Russian **Document Type:** Journal Paper (JP)

Treatment: Practical (P)

Abstract: The rotating device is based on an electric **motor** with a permanent magnet rotor and multi-coil stator, used to **lock** the **shaft** in the selected position. The **motor** is controlled by a multivibrator and logic **block**, comprising a counter and decoder with transistor switches. The transistor-transistor logic circuitry is presented and described. It is implemented using series K155 integrated microcircuits. (0 Refs)

Subfile: C

34/7/14 (Item 14 from file: 23)

Fulltext available through: ScienceDirect

CSA Technology Research Database

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0002287985 IP Accession No: 830352-0413

Roll Gap Adjustment in a Roll Stand

Noe, R; Noe, O; Noe, A

Publication Date: 1982

, United Kingdom

Record Type: Abstract

File Segment: Metadex

Abstract:

A mechanism for adjusting the roll gap comprises setting **spindles** for an adjustable roll, a driving **motor** and driving **shafts** for the setting **spindles**, and transmissions disposed between the driving **shafts** and the setting **spindles**. To attain rapid and exact setting, an over-ride **motor** and an over-ride gearbox preferably of the planetary type are provided, acting on the transmission to each setting **spindle**. A **locking device** e.g. a brake, is associated with each driving **shaft**.

34/7/23 (Item 23 from file: 23)

Fulltext available through: USPTO Full Text Retrieval Options

CSA Technology Research Database

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0004513708 IP Accession No: CA7402310

Bushing designs simplify shaft-mounted drive servicability

World Cement , v 24 , n 4 , p 34-7 , 1993

Publication Date: 1993

Publisher: Palladian Publications Ltd. , 15 South St, Farnham , Surrey , GU9 7QU

Country Of Publication: UK

Publisher Url: <http://www.palladian-publications.com/>

Publisher Email: mail@palladian-publications.com

Document Type: Journal Article

Record Type: Abstract

Language: English

ISSN: 0263-6050

File Segment: Ceramics Abstracts/World Ceramic Abstracts

Abstract:

Author compares the new "torque-assist" taper bushing with past designs. The torque-assisted single-taper bushing utilizes the speed reducer's torque to power the **drive** off the **shaft** bushing during removal. A threaded bushing nut, secured to the taper with a snap ring, is tightened until it draws the unit's tapered hollow bore onto the bushing. This tightening creates a concentric axial force on the tapered bushing, allowing for a wobble-free **shaft lock**. The set screw is tightened and installation is complete.

34/7/25 (Item 25 from file: 8)

Fulltext available through: ScienceDirect

Ei Compendex(R)

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07137383 E.I. No: EIP95042666413

Title: Application of suboptimal control to a flexible manipulator

Author: Crassidis, Agamemnon L.; Meyer, Thomas J.; Wayne, Roger W.; Mook, D. Joseph

Corporate Source: State Univ of New York at Buffalo, Buffalo, NY, USA

Conference Title: Proceedings of the 35th AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference. Part 4 (of 5)

Conference Location: Hilton Head, SC, USA

Conference Date: 19940418-19940420

E.I. Conference No.: 42877

Source: Collection of Technical Papers - Proceedings of the AIAA/ASME/ASCE/AHS/ASC Structures, Structural Dynamics, and Materials Conference v 4 1994. AIAA, New York, NY, USA. p 1915-1922 AIAA-94-1563-CP

Publication Year: 1994

CODEN: 001313

Language: English

Document Type: CA; (Conference Article) **Treatment:** T; (Theoretical)

Journal Announcement: 9506W2

Abstract: This paper investigates the performance and behavior of a slewing motor-beam system with Coulomb friction using various control methods. A model of the system is described which includes a finite element representation for the beam, dynamic interaction between the motor and the beam, and a representation for Coulomb friction. The model is used in the study of closed-loop transient response of the slewing system. The model reasonably predicts the observed slewing behavior. It simulates steady state error in the control of slewing angle and can represent the case of shaft lock-up which leaves the beam oscillating freely. Feedback controller laws developed did not require the use of beam information, yet provided desirable system response. (Author abstract) 17 Refs.

34/7/28 (Item 28 from file: 23)

Fulltext available through: [ScienceDirect](#)

CSA Technology Research Database

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0005045446 IP Accession No: A95-39645

Sliding mode control of a flexible manipulator with Coulomb friction

Crassidis, Agamemnon L; Mayne, Roger W New York, State Univ., Buffalo [Crassidis

Pages: 356-364

Publication Date: 1995

Publisher: Washington, DC: American Institute of Aeronautics and Astronautics

Conference:

AIAA Guidance, Navigation and Control Conference, Baltimore, MD , UNITED STATES , 7-10 Aug. 1995

Document Type: Conference Paper

Record Type: Abstract

Language: ENGLISH

Report No: AIAA Paper 95-3213

Notes: Technical Papers. Pt. 1 (A95-39609 10-63)

No. Of Refs.: 19

File Segment: Aerospace & High Technology

Abstract:

The sliding mode control technique is applied to a slewing motor-beam system with Coulomb friction. A model of the system is described which includes a finite element representation for the beam, dynamic interaction between the motor and the beam, and a representation for Coulomb friction. The model is used in the study of closed-loop transient response of the slewing system. The model reasonably predicts the observed

slewing behavior. It simulates steady-state error in the control of slewing angle and can represent the case of **shaft lock-up** which leaves the beam oscillating freely. A sliding mode control law is developed based on the nonlinear model that counteracts the effects of Coulomb friction in the presence of modeling uncertainties. Sensitivity to varying step size of the sliding mode control law is analyzed. (Author)

34/7/30 (Item 30 from file: 8)

Fulltext available through: USPTO Full Text Retrieval Options
Ei Compendex(R)

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07869256 E.I. No: EIP97113934636

Title: Keyless devices get a grip on shafts

Author: Powers, Kevin

Corporate Source: U.S. Tsubaki Inc, Wheeling, IL, USA

Source: Power Transmission Design v 39 n 10 Oct 1997. p 23-24, 27

Publication Year: 1997

CODEN: PWTDAH **ISSN:** 0032-6070

Language: English

Document Type: JA; (Journal Article) **Treatment:** G; (General Review)

Journal Announcement: 9801W2

Abstract: Keyless locking devices, often called keyless bushings, use friction to lock onto a **shaft** and to the hub of a **drive** component such as a sprocket, pulley, gear, timing cam, or roller. They come in many versions including double taper ring devices which use tapered components to apply locking forces against **shaft** and hub. Other types, including single loading nut devices, threaded tapered bushings, bellows sleeve devices and semifluid devices, use expandable sleeves, pressurized fluid or other means. Because they prevent backlash, keyless devices are well suited for machines that deliver precise motions. They are also useful in servo and step motor motion control applications, in **drive** systems and in machines that frequently transmit high torque.

34/7/32 (Item 32 from file: 5)

Fulltext available through: ScienceDirect
Biosis Previews(R)

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15633844 Biosis No.: 200000352157

Rotatable dynamic seal and guide for a medical obstruction treatment device sub-assembly coupled to a drive motor unit

Author: Walker Blair D (Reprint); Pool Scott L

Author Address: Lake Forest, CA, USA**USA

Journal: Official Gazette of the United States Patent and Trademark Office Patents 1231
(2): Feb. 8, 2000 2000

Medium: e-file

ISSN: 0098-1133

Document Type: Patent

Record Type: Abstract

Language: English

Abstract: A miniaturized obstruction treatment device, e.g., a brush, particularly adapted for medical use formed at the distal end of an elongated brush **drive shaft** having a hollow lumen formed therein for introduction over a guidewire. The brush **drive shaft** is enclosed in the lumen of an brush delivery catheter, and the brush bristles of the distal brush are adapted to be garaged in a distal end section of the brush delivery catheter lumen. A Y-connector and an brush sub-assembly connector are attached to the proximal end of the brush delivery catheter and form an brush sub-assembly with the brush **drive shaft** and brush. The Y-connector allows infusion of thrombolytic agents into the brush delivery catheter lumen for emission at the distal end opening thereof adjacent the brush. In use,

the brush sub-assembly connector connects the brush sub-assembly with a drive motor unit connector of a drive motor unit. The drive motor unit receives the proximal end of the drive shaft and rotates it to rotate the brush bristles. The brush and brush drive shaft distal section are automatically extended out of the catheter lumen distal end opening when the sub-assembly connector and the drive motor unit connector positively lock together. Simultaneously, a drive hub of the brush drive shaft locks into a drive chuck of a drive motor unit to enable rotation of the drive shaft, and the proximal drive shaft end is seated in a dynamic seal that inhibits infiltration of blood and thrombolytic agent into the drive motor housing.

25/6/3 (Item 3 from file: 35)

906562 ORDER NO: AAD86-01915

ACQUISITION AND FUNCTIONAL SIGNIFICANCE OF THE PRE-MOTOR SILENT PERIOD IN ACTIVE SKELETAL MUSCLE (LIMB CONTROL, STRETCH- SHORTEN CYCLE, BALLISTIC MOVEMENT, TRAJECTORY FORMATION, ELECTROMYOGRAPHY)

Year: 1985

25/6/4 (Item 4 from file: 5)

Fulltext available through: [ScienceDirect](#)

10388757 Biosis No.: 199140031648

FIRST FULLY IMPLANTABLE INTRAMEDULLARY SYSTEM FOR CALLUS DISTRACTION INTRAMEDULLARY NAIL WITH PROGRAMMABLE DRIVE FOR LEG LENGTHENING AND SEGMENTAL DISPLACEMENT PRINCIPLES AND PRELIMINARY CLINICAL RESULTS

1990

25/6/6 (Item 6 from file: 155)

Fulltext available through: [ScienceDirect](#)

08393269 PMID: 2298769

Peripheral nerve damage during limb lengthening. Neurophysiology in five cases of bilateral tibial lengthening .

Jan 1990

25/6/7 (Item 7 from file: 155)

Fulltext available through: [ScienceDirect](#)

08383753 PMID: 2403497

Clinical application of the tension-stress effect for limb lengthening.

Jan 1990

25/6/9 (Item 9 from file: 155)

Fulltext available through: [ScienceDirect](#)

10377635 PMID: 7844131

The effect of lengthening of the femur on the extensors of the knee. An electromyographic study.

Feb 1995

25/6/10 (Item 10 from file: 155)

Fulltext available through: [ScienceDirect](#)

11041258 PMID: 8863972

Femur lengthening with a vascularized tibia bone flap.

Aug 1996

25/6/11 (Item 11 from file: 155)

Fulltext available through: [ScienceDirect](#)

10963778 PMID: 8771477

Acute stretching of peripheral nerves inhibits retrograde axonal transport.

Jun 1996

25/6/12 (Item 12 from file: 155)

Fulltext available through: [ScienceDirect](#)

11553350 PMID: 9393923

Lower-limb lengthening in short stature. An electrophysiological and clinical assessment of peripheral nerve function.

Nov 1997

25/6/14 (Item 14 from file: 155)

Fulltext available through: [ScienceDirect](#)

11284354 PMID: 9080754

Electrophysiologic evaluation of neuromuscular functions during limb lengthening by callus distraction.

Mar 1997

25/6/18 (Item 18 from file: 155)

Fulltext available through: [ScienceDirect](#)

12385659 PMID: 10228879

Nerve conduction changes during lower limb lengthening. Somatosensory evoked potentials (SEPs) and F-wave results.

Apr-May 1999

25/6/23 (Item 23 from file: 155)

Fulltext available through: [ScienceDirect](#)

14141627 PMID: 12496582

Focal adhesion kinase expression during mandibular distraction osteogenesis: evidence for mechanotransduction.

Jan 2003

34/6/17 (Item 17 from file: 8)

Fulltext available through: [ScienceDirect](#)

05231602

Title: MERCEDES-BENZ 4MATIC, AN ELECTRONICALLY CONTROLLED FOUR-WHEEL DRIVE SYSTEM FOR IMPROVED ACTIVE SAFETY.

Conference Title: SAE Passenger Car Meeting & Exposition.

Publication Year: 1986

34/6/18 (Item 18 from file: 8)

Fulltext available through: [ScienceDirect](#)

05231601

Title: DIRECTIONAL CONTROL OF 4WD PASSENGER CARS - A STUDY BY COMPUTER SIMULATION.

Conference Title: SAE Passenger Car Meeting & Exposition.

Publication Year: 1986

34/6/19 (Item 19 from file: 8)

Fulltext available through: [ScienceDirect](#)

06038100

Title: Electromechanical guidance fin actuation in a four inch diameter air vehicle.

Conference Title: Aerospace Technology Conference and Exposition

Publication Year: 1990

34/6/21 (Item 21 from file: 23)

Fulltext available through: [ScienceDirect](#)

0004360334 IP Accession No: 199304-53-0282

Machine Tool for Laser-Beam Machining of Workpieces

Publication Date: 1992

34/6/22 (Item 22 from file: 8)

Fulltext available through: [ScienceDirect](#)

06793113

Title: Slewing motor-beam system with Coulomb friction including experimental results

Conference Title: Proceedings of the 14th Biennial ASME Design Technical Conference on Mechanical Vibration and Noise

Publication Year: 1993

34/6/24 (Item 24 from file: 23)

Fulltext available through: [ScienceDirect](#)

0008136609 IP Accession No: 200705-20-133322

Automatic Drivetrain Management Adm

Publication Date: 1994

34/6/26 (Item 26 from file: 8)

Fulltext available through: [ScienceDirect](#)

07054768

Title: Development of a high speed inspection system for prismatic metallic parts

Conference Title: Proceedings of the 1994 International Mechanical Engineering Congress and Exposition

Publication Year: 1994

34/6/27 (Item 27 from file: 8)

Fulltext available through: [ScienceDirect](#)

07683354

Title: Study of the aligning forces generated from a tridem drive axle group

Conference Title: Proceedings of the 1995 4th International Symposium on Heavy Vehicle Weights and Dimensions

Publication Year: 1995

34/6/29 (Item 29 from file: 8)

Fulltext available through: [ScienceDirect](#)

08005713

Title: Rotating-loosening-free conditions of joint structure that fastens drive-shaft and hub in automobile axle

Conference Title: Proceedings of the 1997 ASME International Mechanical Engineering Congress and Exposition

Publication Year: 1997

34/6/31 (Item 31 from file: 5)

Fulltext available through: [ScienceDirect](#)

15844996 Biosis No.: 200100016835

Rotatable attachment mechanism for attaching a medical obstruction treatment device sub-assembly to a drive motor unit

2000

34/6/33 (Item 33 from file: 144)

Fulltext available through: [ScienceDirect](#)

14568551 PASCAL No.: 00-0235045

First Alpha Clutchers for German tankers at Jiangyang Shipyard

2000

34/6/34 (Item 34 from file: 2)

Fulltext available through: [ScienceDirect](#)

09104240 INSPEC Abstract Number: B2004-10-8520-119, C2004-10-3360B-048

Title: Brake system performance requirements of a lightweight electric/hybrid rear wheel

drive vehicle

Publication Date: 2003

[File 9] **Business & Industry(R)** Jul/1994-2007/Sep 03
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 [File 15] **ABI/Inform(R)** 1971-2007/Sep 10
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 [File 160] **Gale Group PROMT(R)** 1972-1989
 (c) 1999 The Gale Group. All rights reserved.
 [File 47] **Gale Group Magazine DB(TM)** 1959-2007/Aug 28
 (c) 2007 The Gale group. All rights reserved.
 [File 148] **Gale Group Trade & Industry DB** 1976-2007/Sep 05
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 *File 148: The **CURRENT** feature is not working in File 148. See **HELP NEWS148**.
 [File 149] **TGG Health&Wellness DB(SM)** 1976-2007/Sep W1
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 [File 441] **ESPICOM Pharm&Med DEVICE NEWS** 2007/Feb W1
 (c) 2007 ESPICOM Bus.Intell. All rights reserved.
 [File 135] **NewsRx Weekly Reports** 1995-2007/Aug W4
 (c) 2007 NewsRx. All rights reserved.
 [File 129] **PHIND(Archival)** 1980-2007/Sep W1
 (c) 2007 Informa UK Ltd. All rights reserved.
 [File 635] **Business Dateline(R)** 1985-2007/Sep 08
 (c) 2007 ProQuest Info&Learning. All rights reserved.
 [File 636] **Gale Group Newsletter DB(TM)** 1987-2007/Sep 07
 (c) 2007 The Gale Group. All rights reserved.
 [File 624] **McGraw-Hill Publications** 1985-2007/Sep 10
 (c) 2007 McGraw-Hill Co. Inc. All rights reserved.

Set	Items	Description
S1	4719479	S MOTOR? ? OR MOTORI?ED OR ENGINE? ? OR DRIVE OR DRIVES
S2	183628	S SPINDLE OR SPINDLES OR AXLE OR AXLES OR AXEL OR AXELS OR SHAFT? ? OR PINTLE? ?
S3	291290	S LOCK OR LOCKS OR LOCKING() (DEVICE? ? OR ELEMENT? ? OR INSTRUMENT? ? OR PIECE? ?)
S4	993	S (LENGTHEN? OR SHORTEN? OR DISTRACTION? ?) (2N) (LEG OR LEGS OR LIMB OR LIMBS OR BONE OR BONES OR TIBIA? ? OR FEMORAL) OR OSTEOGEN?SIS() DISTRACTION? ? OR ILIZAROV() TECHNIQUE
S5	2377	S LINEAR() ACTUATOR? ?
S6	0	S S1(S) S2(S) S3(S) S4
S7	33	S S1(S) S4
S8	3	S S2:S3(S) S7
S9	30	S S7 NOT S8
S10	25	RD (unique items)
S11	6	S S10/2004:2005
S12	0	S S10/2006:2007
S13	19	S S10 NOT S11
S14	19	SORT S13/ALL/PD,A
S15	1182	S S1(S) S2(S) S3
S16	0	S S4 AND S15
S17	0	S S5(S) S15
S18	10	S S5 AND S15
S19	10	S S18 NOT S7
S20	9	RD (unique items)
S21	9	SORT S20/ALL/PD,A

8/3,AB,K/2 (Item 1 from file: 149)
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01164594 **Supplier Number:** 08284263

New technique for bone distraction

Karcher, Helmut L.

British Medical Journal , v299 , n6712 , p1360(1)

Dec 2 , 1989

Publication Format: Magazine/Journal

ISSN: 0959-8146

Language: English

Record Type: Abstract **Target Audience:** Professional

Abstract: A new method for **lengthening bone** tissue has been developed by orthopedic surgeons at the University of Munich in West Germany. Several conditions may lead to the reduction of bone length, including accidents, disease, and congenital deformities. This corrective technique is based on callus distraction, a technique first developed in the early 1960s, where the **shortened bone** is cut in half and the ends are fixed, leaving a space in between. The gap between the two bone pieces is widened as the bone begins to grow together. A new variation on this technique involves the implantation of a nail with a thin rotating screw **spindle**. **The spindle is driven by an electric motor** that gradually lengthens the nail approximately 0.07 mm daily. This device was implanted into a woman who had one thigh bone (femur) that was 40 mm shorter than the other. In this case, the screw **spindle** was tightened mechanically, by turning a small knob that protruded from the hip. The desired bone length was achieved within a few weeks. A second trial involved a patient who was given an electrically **driven** lengthening device that was activated by an external magnet. Patents on the device are pending, but a manufacturer has not been located yet. If further trials prove successful, this device will most likely be marketed in the near future.

14/3,AB,K/1 (Item 1 from file: 47)

Gale Group Magazine DB(TM)

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02369945 **Supplier Number:** 02575025 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Machines that walk.

Raibert, Marc H.; Sutherland, Ivan E.

Scientific American , v248 , p44(10)

Jan , 1983

CODEN: SLAMA

ISSN: 0036-8733

Language: ENGLISH

Record Type: FULLTEXT

Word Count: 6434

Line Count: 00471

...from the right. When it is one step away, the operator pushes a "leap" button. As a result the maximum tension is generated in the **drive** actuator so that the altitude of the next hop will be increased. In flight the **leg** is **shortened** and its normal swinging motion is delayed to provide better clearance of the obstacle. A servomechanism controlling balance moves the leg to the correct landing angle and the **leg** is **lengthened** in preparation for landing. Thereafter the machine continues its normal hopping. The obstacle was 15 centimeters (six inches) high.

Photo: GAITS OF INSECTS provided a...

14/3,AB,K/2 (Item 2 from file: 635)

Business Dateline(R)

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0128523 90-11213

Little Guys Make Waves: Foundation Inspires Economics

Nemeth, Imre

Alaska Journal of Commerce (Anchorage , AK , US) , V 14 N 9 s 1 p 1
Publication Date: 900226
Word Count: 1,930
Dateline: Anchorage, AK; US
Text:

...length of the fixator with a manually-operated calibrated "clicker" bolt as in the Richards' model, the Autogenesis system incorporates a strap-on programmable controller, **motor** assemblies and protective mounting system. The whole point of the device is to **distract** or **lengthen** the bone.

The Autogenesis endeavor reflects Sibert's ideals of a well thought out strategy. While possibly the most successful thus far, the company's efforts define...

14/3,AB,K/7 (Item 7 from file: 149)
TGG Health&Wellness DB(SM)
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01350574 **Supplier Number:** 11873017 (USE FORMAT 7 OR 9 FOR FULL TEXT)
The Ilizarov procedure: limb lengthening and its implications. (Pediatric Orthopedics Series: Part 2)
Simard, Stephanie; Marchant, Mary; Mencio, Gregory
Physical Therapy , v72 , n1 , p25(10)
Jan , 1992

Publication Format: Magazine/Journal
ISSN: 0031-9023
Language: English
Record Type: Fulltext **Target Audience:** Professional
Word Count: 5118 **Line Count:** 00453
...exercise the first day after surgery. Positioning of the extremity to increase ROM is also encouraged immediately postoperatively and may assist in decreasing joint stiffness.
Limb-lengthening stage. Limb lengthening
is usually begun 5 days after surgery. The goals in this stage remain the same as those in the postoperative pre-limb-lengthening stage. Patients may experience increased pain or loss of ROM from the distraction placed on the limb. Patients who have significantly limited ROM at this...
...throughout Ilizarov rehabilitation include isokinetic exercise, eccentric exercise, passive exercise on isokinetic equipment, stationary bicycling, walking on a treadmill, electrical stimulation, hydrotherapy, massage, and gross **motor** developmental activities.[18] Patients who develop pin-site infections, severe joint stiffness, or joint contractures may need to be readmitted to the hospital. Patients with...

14/3,AB,K/12 (Item 12 from file: 149)
TGG Health&Wellness DB(SM)
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01616446 **Supplier Number:** 18203469 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Up with people: dwarves meet identity politics.
Berreby, David
The New Republic , v214 , n18 , p14(4)
April 29 , 1996
Publication Format: Magazine/Journal
ISSN: 0028-6583
Language: English
Record Type: Fulltext; Abstract **Target Audience:** Consumer

Word Count: 2541 **Line Count:** 00199

Abstract: Dwarfs have the most reversible and genetically detectible disability in medicine. However, identity politics makes their advocacy group, Little People of America, oppose the **arm-leg stretching Ilizarov** surgery. And fear of discrimination makes some dwarves oppose a fetal test the achondroplasia 'dwarf' gene.'

Text:

...or relegated to a life of isolation. "Dropping out of school because they couldn't take the ridicule from the other kids, never learning to **drive**, living with their families and babysitting for their sister, that kind of life," says Ruth Ricker, a technical assistance specialist for the federal Department of...about two millimeters a day." Now, hundreds of the operations are performed every year. Paley himself--now a co-director of the Maryland Center for **Limb Lengthening** and

Reconstruction at the Kernan Hospital in Baltimore--has performed some 1,500 since 1987. The vast majority of the operations, though, reassemble shattered limbs or straighten bones deformed by infections, cancer surgery or birth defects. (A common use is to **lengthen** an injured leg so it will be as long as its counterpart.) Why, the LPA activists like to ask, should a little person put him or herself through it? After all, the **Ilizarov technique** is no day at the beach. The treatment takes months and is demanding in many ways, "especially," one journal abstract adds helpfully, "for the patient." Some people who've been through it say the **lengthening bone** merely aches; others say the pain is far worse than that. The patient can walk after a few days (the Ilizarov apparatus bounces along with...

...the child on whom Ilizarov surgery is to be done is likely surrounded by average-height parents, siblings and doctors. "Many of these decisions about **leg lengthening** are being taken by parents long before a child is of age to really know," says Angela Muir Van Etten. "We're not just talking...

...run by David Rimoin, professor of pediatrics at ucla and a member of the LPA medical advisory board. Rimoin said he was "totally opposed" to **limb-lengthening** surgery until he attended a conference on achondroplasia several years ago where he was impressed by how pleased and pain-free some European patients were had had it done. And he got mad, too. He basically said, 'Don't psychoanalyze me when you don't even know me.'" After **leg-lengthening** surgery got established in the late '80s, the '90s brought medical advances that may have an even more profound impact on dwarves: the genes that...

14/3,AB,K/14 (Item 14 from file: 149)

TGG Health&Wellness DB(SM)

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01916963 **Supplier Number:** 62923452 (USE FORMAT 7 OR 9 FOR FULL TEXT)

A Technique for Lower Limb Lengthening.

Erbe, Melissa A.; Ross, Pamela J.

Radiologic Technology , 71 , 5 , 497

May , 2000

Publication Format: Magazine/Journal; Refereed

ISSN: 0033-8397

Language: English

Record Type: Fulltext **Target Audience:** Professional; Trade

Word Count: 1704 **Line Count:** 00146

...because this is crucial to the success of the therapy.(1)

About 7 days after surgery the patient is taught by a physician how to **lengthen** the limb using a process called distraction

osteogenesis. The patient turns bolts on the frame 4 times a day at 6-hour intervals. By turning these bolts...

...same times every day. Too much or too little time between distractions can cause the new bone to form improperly. (2) There are computer-controlled, **motorized** devices available that **lengthen** the bone continuously and automatically. (1)

The distraction length is measured on the threaded tie rods. The number of visible threads should equal the number of days...

14/3,AB,K/16 (Item 16 from file: 47)

Gale Group Magazine DB(TM)

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06122508 **Supplier Number:** 76551023 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Growing Bones. (use of bone distraction osteogenesis devices to correct facial deformities) (Brief Article)

Meadows, Michelle

FDA Consumer , 35 , 4 , 17

July , 2001

Document Type: Brief Article

ISSN: 0362-1332

Language: English **Record Type:** Fulltext

Word Count: 954 **Line Count:** 00074

...that turn automatically or by hydraulics may be on the horizon, Burton says. He estimates that about 2,000 people in the United States undergo **bone distraction** each year, and says the numbers will increase as the technology becomes more well known.

"The exciting thing about it," Dufresne says, "is that we..."

14/3,AB,K/19 (Item 19 from file: 148)

Gale Group Trade & Industry DB

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15428551 **Supplier Number:** 95261658 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Ardie walks the walk. (Input/Output). (robot aids study of aardvarks)

Sharke, Paul

Mechanical Engineering-CIME , 124 , 12 , 76(1)

Dec , 2002

ISSN: 0025-6501

Language: English

Record Type: Fulltext

Word Count: 725 **Line Count:** 00059

...versions of the same **motors**, but they proved weak as well. The next size **motor** he dismissed as being too big and costly. Eventually, he **shortened** Ardie's legs until the high-torque servos could handle the load.

Having proven his concept in wood and plastic, Hrabar switched to machined aluminum in order to...

21/3,K/1 (Item 1 from file: 148)

Gale Group Trade & Industry DB

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03137303 **Supplier Number:** 04791836 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Mechanical components: getting lighter and smaller.

Dvorak, Paul J.

Machine Design , v59 , p120(8)

April 9 , 1987
ISSN: 0024-9114
Language: ENGLISH
Record Type: FULLTEXT

Word Count: 4143 Line Count: 00326

...actuator produces a large force from a small space, but to function, it requires the support of a hydraulic system. One alternative is an electric **linear actuator** that can produce hundreds of pounds of force in the space the size of a coffee cup. Mesur-Matic Electronics Corp., Salem, MA, manufactures one...

...axial leads typically 3 to 4 times the pitch diameter.

Helitronics from Winfred M. Berg, Inc., East Rockaway, NY offers a variety of high lead **linear actuators**. Highest lead possible on the 5/8-in. shaft produces 2.5 in. linear movement per revolution. The Delrin nut is rated for a shear **drive** systems is the Series 33 gear differential from Micron Instrument Corp., Plainview, NY. Differential is **driven** by two self-locking worm **shafts**. If one **drive motor** fails, system **locks** until the second **motor** can be energized.

Phase shifting is another application for twin-**drive** differentials. By driving the secondary **motor** while the primary is operating, adjustments are made...

21/3,K/3 (Item 3 from file: 15)

Fulltext available through: ScienceDirect
ABI/Inform(R)

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00684432 93-33653

Dynamic head loading technology increases drive ruggedness

Parrish, Tom; Kelsic, Gary

Computer Technology Review v12n16 pp: 51-55

Feb 1993

ISSN: 0278-9647 Journal Code: CTN

Word Count: 2790

Text:

...already spinning at a stable speed prior to loading the heads, an air bearing is established without the heads ever contacting the media. When the **drive** is commanded to spin down or when power is removed, the DC **spindle motor** acts as a generator to power the suspensions back up the cams, thereby lifting the heads safely off of the media and into a special over the disk surface, DHL employs a spring-loaded inertial **lock** which holds the actuator in place, functioning much like a seatbelt. This inertial **lock** keeps the heads parked on the ramp structure providing an effective mechanical safeguard against head slap.

In addition to high resistance to shock spikes that...

...design and smaller packaging.

Rotary actuators position the read/write heads by pivoting them in an arc about a fixed point vs the older style **linear actuators** that position the heads in a straight line along a fixed track. Rotary actuators perform very well under linear shock but, due to their inherent...

21/3,K/4 (Item 4 from file: 15)

Fulltext available through: ScienceDirect
ABI/Inform(R)

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01995306 50914040

Design show products

Anonymous

Machine Design v72n5 pp: 102-139

Mar 9, 2000

ISSN: 0024-9114 Journal Code: MDS

Word Count: 3202

Text:

... FRICTIONAL LOCKING DEVICES

This line of keyless frictional **locking** devices, in inch and metric **shafts** from 0.25 to 30 in. and from 6 to 1,000 mm, offers a releasable, adjustable, and backlash-- free mechanical shrink fit with high-torque transmittal. Power transmission components such as rigid and flexible **shaft** couplings, **engine** flywheel couplings, torque limiters, and torque accessories are also offered.

Ringfeder Corp., 165 Carver Ave., Box 691, Westwood, NJ 07675, (201) 6663320. Booth 1845

Circle...parallel and angular misalignment, along with axial motion.

Ruland Manufacturing Co. Eric., 380 Pleasant St., Watertown, MA 02472, (800) 225-4234. Booth 1652

Circle 930

LINEAR ACTUATOR WITH TELESCOPING LEADSCREW

NEMA-size 34 **linear actuator motors** feature a telescoping leadscrew to eliminate space behind the actuator for direct-wall mounting. The internal **motor** consists of two threaded concentric nuts for...

21/3,K/5 (Item 5 from file: 16)

Gale Group PROMT(R)

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08609546 Supplier Number: 72962149 (USE FORMAT 7 FOR FULLTEXT)

Value-Added Power.(permanent split capacitor motor)

Jansurak, Joe

Appliance Manufacturer , v 49 , n 3 , p 25

March , 2001

Language: English Record Type: Fulltext

Document Type: Magazine/Journal ; Trade

Word Count: 5041

...Fischer says that Whirlpool's pump design had a strong influence on the **motor** type and design. The **motor** was customized in terms of **shaft** design and mounting means to accommodate the pump. The **motor** is mounted to the pump using a twist-and-lock design, eliminating the need for bolts and screws.

To further enhance assembly ease, Emerson uses the Mag Mate(R) system by AMP, Harrisburg, Pa., for...consisting of servo **motors** and amplifiers, linear positioning states, gearheads and gear**motors** and complete systems.

Circle 181

HAYDON SWITCH & INSTRUMENT

Capabilities brochure features information on **linear actuators**, including new products, size 17 and 23 hybrid line actuators. The brochure also includes information on rotary stepping **motors**, synchronous gear **motors**, pancake and oscillating...

21/6/7 (Item 7 from file: 16)

10297416 Supplier Number: 95777860 (USE FORMAT 7 FOR FULLTEXT)

Motion control: software gets the spotlight in this motion control reference guide, along with hysteresis-free servomotors and high-resolution encoders. (Basics of Design Engineering).

Dec 12 , 2002

Word Count: 4617

[File 350] Derwent WPIX 1963-2007/UD=200756

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[File 347] JAPIO Dec 1976-2007/Mar(Updated 070809)

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Set	Items	Description
S1	3104813	S MOTOR? ? OR MOTORI?ED OR ENGINE? ? OR DRIVE OR DRIVES
S2	1300400	S SPINDLE OR SPINDLES OR AXLE OR AXLES OR AXEL OR AXELS OR SHAFT? ? OR PINTLE? ?
S3	425995	S LOCK OR LOCKS OR LOCKING() (DEVICE? ? OR ELEMENT? ? OR INSTRUMENT? ? OR PIECE? ?)
S4	777	S (LENGTHEN? OR SHORTEN? OR DISTRACTION? ?) (2N) (LEG OR LEGS OR LIMB OR LIMBS OR BONE OR BONES OR TIBIA? ? OR FEMORAL) OR OSTEOGEN?SIS()DISTRACTION? ? OR ILIZAROV()TECHNIQUE
S5	6118	S LINEAR()ACTUATOR? ?
S6	354379	S ELONGAT?
S7	306911	S LEG OR LEGS OR LIMB OR LIMBS OR BONE OR BONES OR TIBIA? OR FEMORAL
S8	434384	S IC=(A61B? OR A61F?)
S9	340055	S DC=(P31 OR P32)
S10	13662	S S1(S)S2(S)S3
S11	5	S S10 AND (S4 OR S6(2N)S7)
S12	207	S S1(S) (S4 OR S6(2N)S7)
S13	60	S S2:S3(S)S12
S14	19	S S8:S9 AND S13
S15	1679	S S4/TI OR (S6/TI(S)S7/TI)
S16	9	S S13 AND S15
S17	22	S S14 OR S16
S18	21	S S17 NOT S11
S19	18	S S10(S)S5
S20	18	S S19 NOT (S11 OR S17)

18/25,K/3 (Item 3 from file: 350)

Derwent WPIX

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0014236764 Drawing available

WPI Acc no: 2004-422731/200440

XRPX Acc No: N2004-335351

Equipment for displacing two portions of a bone, comprises outer sleeve which contains electric motor and reduction gear to drive threaded rod which engages with threaded shoulder inside inner tube

Patent Assignee: GUICHET J (GUIC-I); GUICHET J M (GUIC-I)

Inventor: GUICHET J; GUICHET J M

Patent Family (4 patents, 99 countries)

Patent Number	Kind	Date	Update	Type
FR 2847153	A1	20040521	200440	B
WO 2004045431	A1	20040603	200440	E
AU 2003302006	A1	20040615	200470	E
EP 1560533	A1	20050810	200552	E

Local Applications (no., kind, date): FR 200214282 A 20021115; WO 2003FR2982 A 20031010; AU 2003302006 A 20031010 ; EP 2003811404 A 20031010; WO 2003FR2982 A 20031010

Priority Applications (no., kind, date): FR 200214282 A 20021115

Alerting Abstract FR A1

NOVELTY - An outer sleeve (1) has electronic processing and control equipment (18), an electric motor (11) and reduction gear (14) located in an upper compartment (4). The reduction gear output shaft (15), typically hexagonal, is connected to an operating rod (3) which is threaded (52) and engages with a threaded shoulder (50,51) inside an inner

tube (40). The inner tube is prevented from rotating by a groove and pin (43,45) and thus moves axially

USE - To displace two portions of a bone. Typically used as part of a medical procedure to lengthen in stages a long bone such as a femur

ADVANTAGE - The equipment is simpler and more flexible in application than current models. The need for hospitalisation and manipulation under anaesthetic is avoided

DESCRIPTION OF DRAWINGS - The drawing shows the displacement equipment

- 1 Outer sleeve
- 3 Operating rod
- 4 Upper compartment
- 11 Electric motor
- 14 Reduction gear
- 15 Output shaft
- 18 Electronic equipment
- 40 Inner tube
- 43,45 Groove and pin
- 50,51 Threaded shoulder
- 52 Operating rod thread

Original Abstracts: ...output shaft of the reducer as well as a correlative movement between the sliding tube (40) and the sleeve (1). The invention is suitable for lengthening long bones such as the femur or similar...

18/25,K/6 (Item 6 from file: 350)

Derwent WPIX

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0010259139 Drawing available

WPI Acc no: 2000-571512/200053

XRPX Acc No: N2000-422768

Apparatus for lengthening bone by distraction osteogenesis is implantable, and uses a telescoping screw assembly and an angled gear drive

Patent Assignee: KALPA ENG INC (KALP-N)

Inventor: LANDSBERGER S E

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update	Type
US 6113599	A	20000905	200053	B

Local Applications (no., kind, date): US 199748557 P 19970604; US 199890454 A 19980604

Priority Applications (no., kind, date): US 199748557 P 19970604; US 199890454 A 19980604

Alerting Abstract US A

NOVELTY - The devices are implantable in an appropriate surgical procedure, and provide for an optional flexible drive shaft (13), used to transmit controlled torque for elongation of the devices thereby effecting distraction osteogenesis. The optional flexible drive shaft may conveniently terminate within the oral or buccal cavity. In one embodiment, the device has a telescoping screw assembly and a drive. The drive may be an angled(bevel) gear drive (25). In another embodiment, a threaded flexible drive shaft is provided which provides for elongation of the devices thereby effecting distraction osteogenesis.

USE - For lengthening bone, particularly unusually small, or asymmetric mandible and other small bones, by distraction osteogenesis.

ADVANTAGE - Less danger of dislocation by falls or bumping, greater distraction control, no external scarring. may also be applied to other types or reconstruction in cranio facial surgery such as maxillary expansion, maxillary advancements, symphyseal widening and mono block fascial advancements.

DESCRIPTION OF DRAWINGS - The figure shows the top view of the apparatus.

10 sheath

12,13 hex driver
25 bevel drive unit
30,31 drive shafts
40 base anchor plate
42 holes
50 drive anchor plate nut
51 drive anchor plate

Original Abstracts: ...mandible and other small bones, by **distraction** osteogenesis are presented. The devices are implantable in an appropriate surgical procedure, and provide for an optional flexible **drive shaft**, used to transmit controlled torque for elongation of the devices thereby effecting distraction osteogenesis, which optional flexible **drive shaft** may conveniently terminate within the oral or buccal cavity. In one embodiment, the devices provide a telescoping screw assembly and **drive** means, which **drive** means may be an angled gear **drive**. In another embodiment, a threaded flexible **drive shaft** is provided which provides for elongation of the devices thereby effecting **distraction** osteogenesis.

Claims: A device for **lengthening bone** by **distraction** osteogenesis comprising: a telescoping screw assembly comprising at least two members, a first member threaded **shaft** cooperatively engaged with the inner screw thread of a second member tubular screw having an outer screw thread and an inner screw thread; a nut for engaging the outer... the second member tubular screw connected to and fixed in position relative to a first securing means for securing to the bone; and an angled **drive** means for providing a **drive** force to the telescoping screw assembly and in communication with the first member threaded **shaft** and fixed in position relative to second **securing** means for securing to the bone.

18/25,K/10 (Item 10 from file: 350)

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0009069914 Drawing available

WPI Acc no: 1998-378447/199833

XRPX Acc No: N1998-295860

Traction system for moving apart two parts of bone esp. for extension or bridging - converts rotation movement of drive shaft in relative axial movement and shaft driven planet rollers with corresp. grooves meshing in hollow body

Patent Assignee: BETZ A (BETZ-I); BUTSCH M (BUTS-I); WITTENSTEIN MOTION CONTROL GMBH (WITT-N)

Inventor: BETZ A; BUTSCH M

Patent Family (9 patents, 79 countries)

Patent Number	Kind	Date	Update	Type
DE 19700225	A1	19980709	199833	B
WO 1998030163	A1	19980716	199834	E
AU 199866132	A	19980803	199850	E
EP 959793	A1	19991201	200001	E
US 6245075	B1	20010612	200135	E
JP 2001507608	W	20010612	200139	E
EP 959793	B1	20021211	200282	E
DE 59806622	G	20030123	200315	E
ES 2184239	T3	20030401	200328	E

Local Applications (no., kind, date): DE 19700225 A 19970107; WO 1998EP60 A 19980107; AU 199866132 A 19980107; EP 1998907929 A 19980107; WO 1998EP60 A 19980107; WO 1998EP60 A 19980107; US 1999341230 A 19991209; JP 1998530537 A 19980107; WO 1998EP60 A 19980107; EP 1998907929 A 19980107; WO 1998EP60 A 19980107; DE 59806622 A 19980107; EP 1998907929 A 19980107; WO 1998EP60 A 19980107; EP 1998907929 A 19980107

Priority Applications (no., kind, date): DE 19700225 A 19970107

Alerting Abstract DE A1

The traction system has a **drive unit (4)** driving a **drive shaft (16)**. The **drive shaft drives planet rollers (19)**, which are held on a circular path, on which driving grooves (21) are provided on their outer circumference. These grooves engage in corresp. **drive grooves (8)** of a hollow body (7) surrounding the planet rollers. So that at least the driving grooves (8) of the hollow body (7) or of the planet rollers (19) are designed as thread grooves.

In order to move the hollow body (7) with a rotation of the **drive shaft (16)**, axially relative to this. The **drive shaft (16)** for the **drive** of the planet rollers (19) is provided with a pinion type outer teething (17), which meshes in an outer teething provided at each planet roller (19), near the **drive grooves (21)**.

ADVANTAGE - Provides high functioning reliability and with smallest possible construction, facilitates at same time highly efficiently working **drive system**.

Original Abstracts: ...3) which can be moved apart axially and can each be secured to one of the two bone sections. The distraction device further comprises a **drive unit (4)** that **drives a drive shaft (16)**, and a device for converting the rotational movement of the **drive shaft (16)** into a **relative axial movement** of the two parts (2, 3) of the intramedullary nail (1). In order to increase operational reliability and reduce the overall size of the device whilst retaining the high degree of efficiency, the **drive shaft (16) drives planetary rollers (19)** which are held on orbits on which they engage by means of **drive grooves (21)** provided on their outer periphery in corresponding **drive grooves (8)** in a hollow body (7) surrounding the planetary rollers (19), at least the **drive grooves (8)** of the hollow body (7) or of the planetary rollers (19) being designed as threaded grooves in order to displace the hollow body (7) axially relative to the **drive shaft (16)** when the latter is rotated... axially and can each be secured to one of the two bone sections. The distraction device further comprises a **drive unit (4)** that **drives a drive shaft (16)**, and a device for converting the rotational movement of the **drive shaft (16)** into a relative axial movement of the two parts (2, 3) of the intramedullary nail (1). In order to increase operational reliability and reduce the overall size of the device while retaining the high degree of efficiency, the **drive shaft (16) drives planetary rollers (19)** which are held on orbits on which they engage by means of **drive grooves (21)** provided on their outer periphery in corresponding **drive grooves (8)** in a hollow body (7) surrounding the planetary rollers (19), at least the **drive grooves (8)** of the hollow body (7) or of the planetary rollers (19) being designed as threaded grooves in order to displace the hollow body (7) axially relative to the **drive shaft (16)** when the latter is rotated.... 3) which can be moved apart axially and can each be secured to one of the two bone sections. The distraction device further comprises a **drive unit (4)** that **drives a drive shaft (16)**, and a device for converting the rotational movement of the **drive shaft (16)** into a relative axial movement of the two parts (2, 3) of the intramedullary nail (1). In order to increase operational reliability and reduce the overall size of the device whilst retaining the high degree of efficiency, the **drive shaft (16) drives planetary rollers (19)** which are held on orbits on which they engage by means of **drive grooves (21)** provided on their outer periphery in corresponding **drive grooves (8)** in a hollow body (7) surrounding the planetary rollers (19), at least the **drive grooves (8)** of the hollow body (7) or of the planetary rollers (19) being designed as threaded grooves in order to displace the hollow body (7) axially relative to the **drive shaft (16)** when the latter is rotated.

18/25,K/13 (Item 13 from file: 350)

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0007125089 Drawing available

WPI Acc no: 1995-156546/199521

XRPX Acc No: N1995-123325

Ligament graft protection device for use during anterior cruciate construction - has digital blocking member with releasable holding sleeve having elongate connection, and radially extending handle attached to hollow sleeve

Patent Assignee: BRISTOL-MYERS SQUIBB CO (BRIM); LINVATEC CORP (LINV-N)

Inventor: BOUCHER J A; DROSS B D; FRUSHELL M R

Patent Family (8 patents, 16 countries)

Patent Number	Kind	Date	Update	Type
EP 649638	A2	19950426	199521	B
AU 199471645	A	19950406	199522	E
CA 2131141	A	19950325	199525	E
EP 649638	A3	19950913	199614	E
AU 677355	B	19970417	199723	E
AU 199716650	A	19970612	199732	E
US 5658289	A	19970819	199739	E
AU 684145	B	19971204	199806	E

Local Applications (no., kind, date): EP 1994202684 A 19940919; AU 199471645 A 19940905; CA 2131141 A 19940830; EP 1994202684 A 19940919; AU 199471645 A 19940905; AU 199471645 A 19940905; AU 199716650 A 19970401; US 1993126941 A 19930924; US 1995552208 A 19951102; AU 199471645 A 19940905; AU 199716650 A 19970401

Priority Applications (no., kind, date): US 1995552208 A 19951102; US 1993126941 A 19930924

Alerting Abstract EP A2

An elongated blocking member for continuously engaging no more than approximately 180 degrees of the arcuate outer surface of the bone screw, when the bone screw is engaged with the screw driver, while being aligned parallel to and spaced from the axis of the bone screw. A member is received by the screw driver, and for releasably holding the elongated blocking member in a predetermined longitudinal and rotational position relative to the screw driver and the screw. An elongated connector joins the elongated blocking member with the releasable holding member.

The elongated blocking member has an arcuate cross-section within a plane perpendicular to the axis. The elongated blocking member has an arcuate cross-section less than or equal to 180 degrees.

ADVANTAGE - Provides adequate graft protection while minimising the size of the device which may lie adjacent an opening in the skin through which the device must extend into a joint, and minimises the arcuate coverage of the screw while still providing adequate graft protection and adequate retention of the screw on a driving device.

Claims:and the graft by said elongated screw driver, said screw-driver having a proximal end and a distal end, a handle at said proximal end, a drive tip at said distal end, and a shaft interposed between said proximal end and said distal end, said drive tip engagable within a drive recess of the bone screw, said bone screw having an axis and an arcuate outer surface, said graft protection device comprising: an elongated blocking member for contiguously engaging a predetermined portion of the arcuate outer surface of the bone screw, when the bone screw is engaged with the screw driver, while being aligned parallel to and spaced from the axis of the bone screw, said elongated blocking member having a first predetermined arcuate cross-section; holding means for slidably frictionally engaging said shaft of said screw driver and for releasably holding said elongated blocking member in a first predetermined longitudinal and rotational position relative to the screw driver, said frictional engagement of said holding means being adapted to be selectively overcome by sliding said holding means relative to said shaft to move said elongated blocking member to a second predetermined longitudinal and rotational position relative to the screw driver; and elongated connecting means extending longitudinally along an axis and joining said elongated blocking member with

said releasable holding means...

18/25,K/14 (Item 14 from file: 350)

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0006812623 Drawing available

WPI Acc no: 1994-199897/199424

XRPX Acc No: N1994-157338

Intramedullary rod for fixing femoral fractures - includes thin proximal segment and is cannulated for installation over guidewire, and including internal threads

Patent Assignee: GREENVILLE HOSPITAL SYSTEM (GREE-N); LATOUR R A (LATO-I); SHULER T E (SHUL-I); UNIV CLEMSON (UYCL-N)

Inventor: LATOUR R A; SHULER T E

Patent Family (5 patents, 18 countries)

Patent Number	Kind	Date	Update	Type
WO 1994012126	A1	19940609	199424	B
US 5429640	A	19950704	199532	E
US 5562667	A	19961008	199646	E
EP 746281	A1	19961211	199703	E
EP 746281	A4	19970101	199841	E

Local Applications (no., kind, date): WO 1993US11113 A 19931116; US 1992982291 A 19921127; US 1992982291 A 19921127; US 1995428059 A 19950425; WO 1993US11113 A 19931116; EP 1994901534 A 19931116; EP 1994901534 A 19931116

Priority Applications (no., kind, date): US 1995428059 A 19950425; US 1992982291 A 19921127

Alerting Abstract WO A1

The rod (36) comprises an elongated cannulated **shaft** with a tip end for being seated in a femoral shaft, with the tip end being introduced in a relatively distal direction through the proximal extremity of a receiving fractured femur. A relatively short proximal cannulated shaft segment (40) associated in axial alignment with the elongated rod **shaft**, proximal to it and opposite to the shaft tip end.

It resides generally in a femoral hip region whenever the rod shaft is situated in a receiving femoral shaft. The **proximal shaft segment include connections (42,44,46) for selectively interconnecting with drive components and extraction components for alternate installation and withdrawal, respectively, of the rod relative to a receiving femur.**

USE/ADVANTAGE - A femoral intramedullary rod for the biomechanically stable anatomic reduction of a femoral shaft fracture while facilitating the independent treatment of an ipsilateral femoral hip fracture.

Claims: A femoral intramedullary rod for the biomechanically stable anatomic reduction of a femoral **shaft** fracture while facilitating the independent treatment of an ipsilateral femoral hip fracture, said intramedullary rod comprising: an elongated cannulated **shaft** with a tip end for being seated in a femoral **shaft** with said tip end introduced in a relatively distal direction through the proximal extremity of a receiving fractured femur; and a proximal cannulated substantially circular **shaft** segment associated in axial alignment with said elongated **shaft**, proximal to said elongated **shaft** and opposite to said **shaft** tip end, for residing generally in a femoral hip region whenever said elongated **shaft** is situated in a receiving femoral **shaft**, said **proximal shaft segment** including connection means for selectively interconnecting with **drive** components and extraction components for alternate installation and withdrawal, respectively, of the femoral intramedullary rod relative to a receiving femur, and said proximal **shaft** segment further including an elongated region of relatively reduced cross-sectional area spaced from and independent of said connection means defining a longitudinally **elongated femoral hip screw** passageway, said reduced cross-sectional area occupies an angular portion of an

intermediate portion of said proximal **shaft** segment, said angular portion being only in a range of generally 180 degrees to 120 degrees of the circumference of said proximal **shaft** segment, said passageway thereby including to the longitudinal centerline of said proximal **shaft** segment so that femoral hip screws may be introduced through said passageway independently of and variably positionable relative said rod **shaft** into a femoral hip region through an angular range defined by said **elongated femoral hip screw** passageway for the treatment of fractures therein, and wherein said elongated region of relatively reduced cross-sectional area occupies one of a posterior and anterior... . What is claimed is: A method of treatment for ipsilateral femoral hip and **shaft** fractures, said method comprising:
providing an intramedullary rod having an **elongated shaft** segment with a tip end and a proximal **shaft** segment in axial alignment with the elongated **shaft** segment, the intramedullary rod having connection means for selectively interconnecting with **drive components** and extraction components for alternate installation and withdrawal of the intramedullary rod relative to a receiving femur, the proximal **shaft** segment further defining a longitudinally elongated hip screw passageway therethrough separate from the connection means, the elongated hip screw passageway defining a relatively broad range for angular positioning of hip screws therethrough such that the position of hip... . dependent upon the position of the intramedullary rod in the femur;
seating the intramedullary rod in a fractured femur with the tip end and elongated **shaft** optimally situated in the femoral **shaft** for treatment of a fracture therein, and with the elongated hip screw passageway situated in the femoral hip region;
determining an optimum angle of insertion of at least one femoral hip screw into the femoral hip region through the elongated... . fracture, the optimum angle of insertion of the hip screw being independent of the optimum placement of the intramedullary rod for treatment of the femoral **shaft** fracture; and
inserting a hip screw through the elongated hip screw passageway at the determined optimum **angle** into the hip region for treatment of the **femoral hip fracture.**>

18/25,K/15 (Item 15 from file: 350)

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0004936189 Drawing available

WPI Acc no: 1989-326598/198945

Bone manipulating device for limb surgery - has twin heads with shafts to grip broken parts of bone to be lengthened with motorised spacing drive mechanism

Patent Assignee: OMCI SA (OMCI-N)

Inventor: SAILLY M; TANGUY A

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update	Type
FR 2628627	A	19890922	198945	B

Local Applications (no., kind, date): FR 19883657 A 19880316

Priority Applications (no., kind, date): FR 19883657 A 19880316

Alerting Abstract FR A

The device consists of two shaft-carrying heads (3,4) to which **bone-engaging shafts** (8) are secured. The heads are secured together firmly to prevent any movement in directions other than longitudinally of the device.

A **spacing mechanism** connects the heads for movement in the longitudinal direction. The mechanism includes a screw jack (7) and a **motor** and control system for stepwise or continuous movement of the mechanism.

USE/ADVANTAGE - Precise control of bone spacing and movement.

18/25,K/17 (Item 17 from file: 350)

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0003716018

WPI Acc no: 1986-161413/198625

XRPX Acc No: N1986-120231

Bone elongation device - shaft of worm reducer bears disk bush with worm wheel and lead screw has worm threads

Patent Assignee: TRAUM ORTHOPED RES (TRAU-R)

Inventor: BLISKUNOV A I

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update	Type
SU 1192808	A	19851123	198625	B

Local Applications (no., kind, date): SU 3753527 A 19840614

Priority Applications (no., kind, date): SU 3753527 A 19840614

Alerting Abstract SU A

The **bone elongation** device has two telescopically joined hollow bodies with fasteners, and a lead screw joined to the inner hollow body and to a **drive** consisting of a ratchet mechanism joined to a worm reducer with **shaft** linked to the ratchet wheel and to a pulley with flexible link and spring. The **shaft** (17) of the worm reducer bears a disc bush (26) with a worm wheel. The lead screw (11) has worm threading (13) linked to a worm wheel (12). The free end of the spring is joined to the disc bush (26).

USE - To elongate the femur by even traction. Bul.43/23.11.85

18/25,K/20 (Item 20 from file: 350)

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0001346770

WPI Acc no: 1977-A5144Y/197703

Bone distortion correction instrument - has blade with partly spherical toothed portion coupled to oscillating drive unit

Patent Assignee: COHEN P (COHE-I)

Patent Family (1 patents, 1 countries)

Patent Number	Kind	Date	Update	Type
FR 2304322	A	19761119	197703	B

Local Applications (no., kind, date): FR.19758180 A 19750317

Alerting Abstract FR A

The osteotomy instrument is for the surgical correction of a bone distortion in three dimensions without any appreciable shortening of the bone or the use of grafting. It has a blade (1) whose surface is a section of toothed sphere, joined by a cylindrical spindle (2) to a drive unit (3), imparting an oscillating movement to the blade.

20/3,K/4 (Item 4 from file: 350)

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0014564053 Drawing available

WPI Acc no: 2004-746011/200473

XRPX Acc No: N2004-589230

Multiple ball joint gimbal mount apparatus for radar antenna system, selectively actuates linear motor actuators for selectively positioning mount platform structure at selected position within specific range of motion

Patent Assignee: KNOSKI J L (KNOS-I); RAYTHEON CO (RAYT)

Inventor: KNOSKI J L

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application	Kind	Date	Update	Type
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			Number				
US 20040195474	A1	20041007	US 2003408623	A	20030407	200473	B
US 6820846	B2	20041123	US 2003408623	A	20030407	200477	E

Priority Applications (no., kind, date): US 2003408623 A 20030407

Original Abstracts: ...multiple ball joint gimbal mount apparatus which includes a mount platform structure, and a plurality of linear motor actuators arranged in a housing assembly. Each actuator includes an actuator shaft and an actuator connector at a distal end of the shaft. The platform structure includes a plurality of platform connectors each for coupling to a corresponding actuator connector to form a pivoting connection between the actuator shaft and the platform structure. A controller selectively actuates the plurality of linear motor actuators to selectively position the plurality of actuator shafts along respective shaft axes and position the mount platform structure at a selected position within a gimbal range of motion. The gimbal structure can optionally include a mechanism to selectively lock the mount structure in any respective position within the gimbal range of motion.

20/3,K/5 (Item 5 from file: 350)

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0014461953 Drawing available

WPI Acc no: 2004-653243/200463

Related WPI Acc No: 2004-653244

XRPX Acc No: N2004-516934

Drive mechanism for use in e.g. industrial robot, has endless drive belt suspended around pair of support rolls, which is made of electroconductive polymer, so that it undergoes electrolytic expansion/contraction

Patent Assignee: E MEX KK (EMEX-N); EAMEX CORP (EAME-N)

Inventor: HARA S; NAKAYAMA M; SEWA S; ZAMA T

Patent Family (2 patents, 106 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2004075388	A1	20040902	WO 2004JP1764	A	20040218	200463	B
JP 2005034615	A	20050210	JP 200442030	A	20040218	200511	E

Priority Applications (no., kind, date): JP 200340346 A 20030218; JP 2003190670 A 20030702

Alerting Abstract ... USE - For use in artificial muscles, and as joint of industrial robot or human body, in robot arm, prosthetic arm, linear actuator, clamping device for clamping target object between pair of grips, finger-like structure (claimed), and in switch, sensor, pressing device, indoor installation type apparatus, positioning device, position-control apparatus, elevating apparatus... industrial devices, such as hydrometer control device, soft manipulator, underwater valve, soft transporter, fishing bait, propulsion fin, electronic office equipment, antenna, bed, chair, medical equipment, engine, optical instruments, fixing tools, side trimmer, vehicle, cleaning device, article processing apparatus, measurement apparatus, testing apparatus, control devices, machine tool, process machinery, electronic devices, manipulator, mast, game machines, recreational devices, boarding... aircraft-mounted equipment extension apparatus, valve, brake and locking device used in electronic office equipment and measurement apparatus, and in inkjet printer, copier, facsimile, disk drive device, printer for computer aided design (CAD), paper adjustment unit in paper feeder, vehicle-mounted telescoping mast, massaging unit of chair-like massaging machine, electrically driven reclining chair, easy chair, collapsible... blood pressure measurement apparatus, endoscope device, cataract surgery apparatus using ultrasonic waves, exercise devices, such as jaw movement device, vibrator isolator for preventing transmission of

engine vibration to vehicle frame, intake/exhaust valve of internal combustion engine, diesel-engine fuel control system, lens drive unit, calibration instrument of image pick-up devices, camcorder lens, still camera, video camera, drive unit of auto-focusing mechanism of camera, auto guide unit in optical telescope, stereoscopic-vision camera, binocular, lens barrel, optical communication devices, optical information processing devices, optical-axis aligning device, focal length adjustment unit in optical systems, camera shutter mechanism, metal fitting for hoses, spring in motor-vehicle suspension, fuel-filling lid in vehicle, bulldozer blade, clutch in motor-vehicle transmission unit, wheel chair, electrically driven table, computer tomography (CT) scanner, cabin tilting apparatus for truck, unloader in special vehicles used for conveying heavy articles, discharge nozzle and flow-rate controller in foodstuff processing apparatus, trolley, device for measuring three-dimensional shape of surfaces, stage, detection system, piston drive unit in water-permeable test device, electric power generator, oscillation device of tuning mirror of sapphire laser oscillation wavelength switching mechanism, gas concentration measuring device, inspection apparatus of printed circuit board... support device in flatness measuring apparatus, semiconductor exposure apparatus, semiconductor inspection apparatus, head moving unit of magnetic-tape system, electrophotographic image forming devices, condenser-lens drive control unit in optical-disk exposure apparatus, information recording/reproducing apparatus, circuit breaker, shaping machines, vulcanizer, components alignment apparatus, compression molding machine, retention unit of welding apparatus, bag making machine, injection molding machine, fluid coating devices, lacquer spraying device, cam-shaft manufacturing apparatus, lining-material lifting apparatus, selvage control unit in loom, needle drive system of tufting machine, grinding apparatus for components, such as cam shaft and ultra precision components, louver drive system, knife drive system, braking device of heddle frame in loom, protective-sheet peeling apparatus for semiconductor substrate, assembly apparatus for electron gun for cathode ray tube, apparatus for manufacturing lace for decorating edges of clothes, tablecloth, seat cover, horizontal moving mechanism of annealing-machine drive device, support arm of glass smelter, rack movement unit of exposure apparatus used for manufacture of fluorescent screen of color picture tube, torch arm of welding apparatus, substrate washing apparatus, chemical... device, assembling device for micro components, auxiliary equipment, solenoid operated valves in hydraulic systems, valve in movable nozzle of rocket, pressure control valve, and steering-lock device in vehicles.... ADVANTAGE - Enables easily fixing the drive belt around the support rolls. Enables stably holding the belt on the rolls...

20/3,K/6 (Item 6 from file: 350)

Derwent WPIX

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0014434879 Drawing available

WPI Acc no: 2004-625354/200460

XRPX Acc No: N2004-494545

Actuator for positioning device of semiconductor exposure apparatus, has multiple leads connected to operating section comprising conductive polymer, among which two leads are provided with spring

Patent Assignee: EAMEX CORP (EAME-N); SEWA S (SEWA-I)

Inventor: HARA S; ZAMA T

Patent Family (2 patents, 106 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2004068690	A1	20040812	WO 2004JP999	A	20040202	200460	B
JP 2004254497	A	20040909	JP 200425763	A	20040202	200460	E

Priority Applications (no., kind, date): JP 200325009 A 20030131

Alerting Abstract ... gun assembly apparatus, torchon lace manufacturing machine, torch

arm of ball-bonding apparatus, and press apparatus (claimed) such as press device of power transmission, mechanical **locking device**, steering **lock** apparatus for vehicle, negative **load limit** mechanism and joint releasing mechanism...

20/3,K/7 (Item 7 from file: 350)

Derwent WPIX

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0013804473 Drawing available

WPI Acc no: 2003-021307/200302

Related WPI Acc No: 2003-228309; 2004-467062

XRAM Acc no: C2003-005391

XRPX Acc No: N2003-016624

Rotary steerable drilling tool for wells used in production of petroleum products, includes torque transmitting coupling for transmitting torque from tool collar to bit shaft at fixed position along bit shaft

Patent Assignee: KOTSONIS S (KOTS-I); MARTINEZ R (MART-I); PISONI A C (PISO-I); SCHAAF S (SCHA-I); SCHLUMBERGER CANADA LTD (SLMB); SCHLUMBERGER HOLDINGS LTD (SLMB); SCHLUMBERGER SURENCO SA (SLMB); SCHLUMBERGER TECHNOLOGY BV (SLMB); SCHLUMBERGER TECHNOLOGY CORP (SLMB); SERVICES PETROL SCHLUMBERGER (SLMB); SERVICES PETROLIERS SCHLUMBERGER (SLMB)
 Inventor: KONTSONIS S; KOTSONICS S; KOTSONIS S; MARTINEZ R; PISONI A C; SCHAAF S
 Patent Family (15 patents, 32 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 1258593	A2	20021120	EP 2002252787	A	20020419	200302	B
US 20020175003	A1	20021128	US 2001289771	P	20010509	200302	E
			US 2002122108	A	20020412		
NO 200202203	A	20021111	NO 20022203	A	20020508	200304	E
AU 200235565	A	20021121	AU 200235565	A	20020419	200305	E
CA 2383668	A1	20021109	CA 2383668	A	20020426	200305	E
BR 200201491	A	20030107	BR 20021491	A	20020429	200309	E
AU 769053	B	20040115	AU 200235565	A	20020419	200409	E
EP 1258593	B1	20041201	EP 2002252787	A	20020419	200479	E
US 6837315	B2	20050104	US 2001289771	P	20010509	200503	E
			US 2002122108	A	20020412		
DE 60202097	E	20050105	DE 60202097	A	20020419	200505	E
			EP 2002252787	A	20020419		
MX 2002004500	A1	20040701	MX 20024500	A	20020506	200545	E
DE 60202097	T2	20051222	DE 60202097	A	20020419	200601	E
			EP 2002252787	A	20020419		
MX 237595	B	20060607	MX 20024500	A	20020506	200681	E
CA 2578828	A1	20021109	CA 2383668	A	20020426	200732	E
			CA 2578828	A	20020426		
CA 2383668	C	20070619	CA 2383668	A	20020426	200742	E

Priority Applications (no., kind, date): US 2001289771 P 20010509; US 2002122108 A 20020412; EP 2002252787 A 20020419

Technology Focus ...an outer ring on which the **actuator** acts. An actuator is provided to uncouple the offset mandrel from the variable offset coupling. It comprises a **linear actuator** having a **motor**/ball screw assembly (15). The **motor** is an annular **motor**. The **bit shaft**, at the fixed point, comprises protrusions extending radially from the exterior surface of the drill bit **shaft**. The torque transmitting coupling comprises a ring (25) that surrounds the bit **shaft** and each protrusion is aligned with a perforation of the ring, and cylinders located within the perforations of the ring and the protrusions enter the... ..the tool collar have cross-sections which are polygons. The sealing system

comprises a bellow seal located between the tool collar and the drill bit **shaft**. A pressure between the interior of the tool collar and fluid pressure in a well is equalized by a pressure compensation system comprising a conduit (20) passing through the tool collar and a slidable piston (21). The ring can close a gap (46) between the drill bit **shaft** and the lower end of the tool collar. A tube (29) is provided to conduct drilling fluid from an upper end of the **motor** to the upper end of the drill bit **shaft**.

20/3,K/8 (Item 8 from file: 350)

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0013766891 Drawing available

WPI Acc no: 2003-866048/200380

XRPX Acc No: N2003-691318

Motor-driven lock has linear actuator provided for withdrawing slip bolt and latches

Patent Assignee: DOMOTICA MFR SL (DOMO-N)

Inventor: SAHUQUILLO DE LEON E

Patent Family (3 patents, 27 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2003095774	A1	20031120	WO 2003ES193	A	20030505	200380	B
ES 2197814	A1	20040101	ES 20021061	A	20020508	200410	E
ES 2197814	B1	20050401	ES 20021061	A	20020508	200524	E

Priority Applications (no., kind, date): ES 20021061 A 20020508

Original Abstracts: The invention relates to a **motor-driven lock** with a **linear actuator**. The inventive **lock** employs the simultaneous **withdrawal** of a slip bolt (6) and at least one latch (4) which are **locked** in the extended position, in which the slip bolt (6) acts... occupy a partially extended position in which it acts as a slip bolt. The slip bolt (6) and latches (4 and 53) are withdrawn using **motor** means comprising a **linear actuator** (22) which is **used** to convert a rotational movement into a linear movement. The very small-dimensioned **linear actuator** (22) (44x18x12 mm) **consists** of an actuating screw (48) which acts along an axis parallel to the **motorization** without stroke limitation. In addition, said **linear actuator**, which can **support both** vertical and horizontal high loads, can operate simultaneously in two directions, by means of both ends of the screw. The above-mentioned **linear actuator** is made from a body comprising two equal plates (42) which support an assembly consisting of the **shaft** of the **motor** (50) which **drives** a cog pulley **nut** (48), by means of a cogged belt (43), said nut (48) rotating on a screw **spindle** without any axial **movement**.

20/3,K/9 (Item 9 from file: 350)

Derwent WPIX

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0013015323 Drawing available

WPI Acc no: 2003-093708/200308

XRPX Acc No: N2003-074176

Linear valve actuator for use in a variety of applications for controlling the flow of solid, liquid and gaseous material comprises a shaft with a externally splined portion

Patent Assignee: KOWALSKI K (KOWA-I); TRI-TECH INC (TRIT-N); TRITEX CORP (TRIT-N)

Inventor: KOWALSKI K

Patent Family (6 patents, 100 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2002101274	A1	20021219	WO 2002US18503	A	20020610	200308	B
EP 1407178	A1	20040414	EP 2002737465	A	20020610	200426	E
			WO 2002US18503	A	20020610		

TW 563009	A	20031121	TW 2002112822	A	20020612	200429	E
AU 2002310392	A1	20021223	AU 2002310392	A	20020610	200452	E
US 20040173770	A1	20040909	WO 2002US18503	A	20020610	200459	E
			US 2003480552	A	20031212		
US 6932319	B2	20050823	US 2001879625	A	20010613	200556	E
			WO 2002US18503	A	20020610		
			US 2003480552	A	20031212		

Priority Applications (no., kind, date): US 2003480552 A 20031212; US 2001879625 A 20010613

Claims: ...said valve; (g) a pair of latches formed on an outer surface of a collar extension of a stator of an electric motor in said linear actuator; (h) a pair of channels formed in an inner surface of said collar, inner surfaces of said latches defining part of inner surfaces of said channels; (i) a pair of openings defined through said collar extension adjacent said latches; and (j) said locking tabs, said latches, and said openings being dimensioned such that said locking tabs can...

20/3,K/10 (Item 10 from file: 350)

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0012755787 Drawing available

WPI Acc no: 2002-609017/200265

XRPX Acc No: N2002-482237

Device for automatic management of renting and secure storage of bikes and mopeds, has a modular construction and a card reader device for selection of, and payment for, a bike that is automatically brought to a collection point

Patent Assignee: MAKDOUD A (MAKD-I)

Inventor: MAKDOUD A

Patent Family (3 patents, 37 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 2002067210	A1	20020829	WO 2001FR2654	A	20010823	200265	B
AU 2001284153	A1	20020904	AU 2001284153	A	20010823	200427	E
EP 1410341	A1	20040421	EP 2001963118	A	20010823	200427	E
			WO 2001FR2654	A	20010823		

Priority Applications (no., kind, date): FR 20011271 A 20010129

Original Abstracts: ...of available products. The transport of cycles between the store (18) and the revolving platform (14) is provided by a manipulator (19) equipped with a linear actuator fixed to the central beam (22). Said manipulator (19) is equipped with a grip arm (24) provided with clamping and centring control systems. The motor unit (20 and 21) drives the assembly in rotation (Figure 2). 3(deg)) Said assemblies of devices should cover the zones equipped to satisfy the user's requirements, one of said devices consists of an adjustable conveyor system (1), driven by a timing motor (8) generating a closed circuit movement. Equipped with an encoder, said timing motor (8) transmits to the assembly of pallets (6) the circular movement. Said pallets (6) are digitised and identified by the automaton; on said pallets (6), support systems (4) are fixed for securing the bikes; at a specific site of the conveyor, cells (5) lock upstream and downstream a pallet (6), so that the robot manipulator (R7) can grip the cycle and set it down. Said manipulator (R7) is provided with a three-dimensional...

20/3,K/11 (Item 11 from file: 350)

Derwent WPIX

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0012416960 Drawing available

WPI Acc no: 2002-361336/200239

XRPX Acc No: N2002-282387

Spare tire carrier for sports utility vehicle, has arm controller with ratchet assembly which rotates threaded sleeve to lower and raise arm and wheel engaging portion

Patent Assignee: NEWBILL A J (NEWB-I)

Inventor: NEWBILL A J

Patent Family (6 patents, 4 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 20020040917	A1	20020411	US 2000684081	A	20001010	200239	B
			US 2001951220	A	20010914		
AU 200178255	A	20020411	AU 200178255	A	20011005	200239	E
CA 2358338	A1	20020410	CA 2358338	A	20011002	200239	E
NZ 514717	A	20030829	NZ 514717	A	20011010	200365	E
US 6659318	B2	20031209	US 2001951220	A	20010914	200381	E
AU 782803	B2	20050901	AU 200178255	A	20011005	200565	E

Priority Applications (no., kind, date): US 2000684081 A 20001010; US 2001951220 A 20010914

Original Abstracts:... hitch or vehicle frame, with a base plate at its outer end to support the carrier mounting plate. A modified preferred carrier includes an electrical **linear actuator** to control the carrier arm. The arm is secured by a latch assembly with multiple locks. A support block on the arm facilitates wheel **positioning**. >

20/3,K/12 (Item 12 from file: 350)

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0010127366 Drawing available

WPI Acc no: 2000-435463/200038

XRPX Acc No: N2000-325503

Electrically operated linear actuator for e.g. hospital bed, elevation table, CT scanner, has roller clutch that does not lock and tube that does not obstruct rotating shaft when thrust loading is resisted

Patent Assignee: NIPPON SEIKO KK (NSEI)

Inventor: KAWADA D; SHIONO H; WATANABE M; YAMAGUCHI M

Patent Family (2 patents, 1 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
JP 2000152557	A	20000530	JP 1998315267	A	19981106	200038	B
JP 3959872	B2	20070815	JP 1998315267	A	19981106	200755	E

Priority Applications (no., kind, date): JP 1998315267 A 19981106

...NOVELTY - The **linear actuator** has a roller clutch (36) that does not lock and, a tube (34) that does not obstruct the rotation of a rotating **shaft** (2) when the thrust loading is resisted and an output **shaft** (26) is varied. The rotating **shaft** is driven by an electric **motor**. The roller clutch performs a **lock** when the rotating **shaft** is rotated with the thrust loading.

20/3,K/13 (Item 13 from file: 350)

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0009105438

WPI Acc no: 1999-024712/199902

XRAM Acc no: C1999-007735

XRPX Acc No: N1999-018884

Apparatus for dynamically balancing tyre during retreading - includes axially adjustable motor driven rim assembly coupled with imbalance sensors

Patent Assignee: CIMA IMPIANTI SPA (CIMA-N)

Inventor: BROGI D; CAPECCHI M

Patent Family (3 patents, 79 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1998053294	A1	19981126	WO 1998IT124	A	19980518	199902	B
AU 199875475	A	19981211	AU 199875475	A	19980518	199917	E
IT 1293100	B	19990211	IT 1997FI119	A	19970520	200147	E

Priority Applications (no., kind, date): IT 1997FI119 A 19970520

Alerting Abstract ...tubular extension (28). Second disk (26) can be moved axially relative to first disk (18) by means of push rod (36) which is driven by linear actuator (40). The desired working position of second disk (26) is maintained by a locking system in which forked lock (46) is advanced radially by linear actuator (48) to engage with a shaped portion (36A) of push rod (36). During the retreading operation, an inflated tyre is supported on rims (18A,26A) and is rotated by means of spindle (10) which is driven through belt (44) by motor (42). Dynamic imbalances in the tyre are detected by vibration and other sensors (3,4) which are associated with instrumentation (5) for measuring the angular... **Documentation Abstract** ...tubular extension (28). Second disk (26) can be moved axially relative to first disk (18) by means of push rod (36) which is driven by linear actuator (40). The desired working position of second disk (26) is maintained by a locking system in which forked lock (46) is advanced radially by linear actuator (48) to engage with a shaped portion (36A) of push rod (36). During the retreading operation, an inflated tyre is supported on rims (18A,26A) and is rotated by means of spindle (10) which is driven through belt (44) by motor (42). Dynamic imbalances in the tyre are detected by vibration and other sensors (3,4) which are associated with instrumentation (5) for measuring the angular...

20/3,K/14 (Item 14 from file: 350)

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0007081959 Drawing available

WPI Acc no: 1995-107018/199514

XRPX Acc No: N1995-110006

Automatic completion of casing joint at high line voltage - using crane or helicopter supported drive, cable end wedges, wedge locking facility and communication device for operation by remote control

Patent Assignee: POLYTECH AB (POLY-N); VATTENFALL AB (VATT-N)

Inventor: SEGERSTROEM B; SEGERSTROEM B T; SEGERSTROM B T; TORBJOERN B

Patent Family (7 patents, 20 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
WO 1995006346	A1	19950302	WO 1994SE783	A	19940826	199514	B
SE 199302762	A	19950228	SE 19932762	A	19930827	199519	E
EP 756768	A1	19970205	EP 1994926422	A	19940826	199711	E
			WO 1994SE783	A	19940826		
SE 507042	C2	19980316	SE 19932762	A	19930827	199817	E
EP 756768	B1	19980527	EP 1994926422	A	19940826	199825	E
			WO 1994SE783	A	19940826		
US 5806180	A	19980915	WO 1994SE783	A	19940826	199844	E
			US 1996600919	A	19960429		

CA 2170369	C	20050712	CA 2170369	A	19940826	200547	E
			WO 1994SE783	A	19940826		

Priority Applications (no., kind, date): SE 19932762 A 19930827

Original Abstracts: ...linear actuator for placing first and second wedge sockets at least partly surrounding the line and cooperating with corresponding wedge elements. At least one threaded **shaft**, powered by an actuator **motor**, is provided to pull together the wedge sockets with the wedge elements. Together, the wedge elements and wedge sockets surround and **lock** around the line at each side of the socket joint. Once **locked** around the line, the coupling between the actuator **motor** and the threaded **shaft** may be severed, and the frame and associated elements removed from the line. The wedge elements and wedge sockets, clamped around the line, remain. The wedge sockets are firmly tied together across the existing joint by the one or more threaded **shafts**, forming a mechanical as well as electrical shunt joint in parallel to the existing joint...

20/3,K/15 (Item 15 from file: 350)

Derwent WPIX

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0004524160 Drawing available

WPI Acc no: 1988-272137/198839

Linear servo-positioner with longitudinal guideway - has slide carriage with rotary drive member, and rotary drive for driving interconnection of carriage

Patent Assignee: PROMA (PROM-N)

Inventor: KAISER S H; LIPINSKI R

Patent Family (2 patents, 14 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
EP 283548	A	19880928	EP 1987107009	A	19870514	198839	B
BR 198706430	A	19881004				198844	E

Priority Applications (no., kind, date): DE 3709616 A 19870324

Original Abstracts: The linear actuator has a longitudinal guide, at least one slide (12) mounted in a longitudinally displaceable manner on this longitudinal guide, and a **drive** source (1) producing a linear movement of at least one **drive** member, the **driven drive** member of which **drive** source (1) is coupled to the slide. In order to also alternatively produce a rotational actuating movement without an additional **drive** source, at least one slide with a **drive** element (16) mounted on it so as to be rotatable about a **spindle** (17) fixed to the slide is arranged on the longitudinal guide (11), allocated to which **drive** element (16) are devices (19) for taking the rotary movement. The **drive** element is coupled to the **drive** member (21) of the linear **drive** source via a gear mechanism (20, 24) imparting a rotary movement to it about its axis as a function of the linear movement of the **drive** member, while means (27, 30, 31) which can be operated alternatively are allocated to the slide, which means (27, 30, 31) can **lock** the slide in a fixed position relative to the longitudinal guide when the **drive** element is **driven** or can **lock** the **drive** element in a rotationally fixed manner relative to the slide when the slide is **driven**.

20/3,K/16 (Item 16 from file: 350)

Derwent WPIX

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0004114524

WPI Acc no: 1987-220863/198731

XRAM Acc no: C1987-092867

XRPX Acc No: N1987-165367

Fluid flow controller for patient treatment system - has motor driven clamp with manual

override

Patent Assignee: MCNEIL LAB INC (MCNI)

Inventor: TROUTNER V H

Patent Family (8 patents, 11 countries)

Patent Number	Kind	Date	Application Number	Kind	Date	Update	Type
US 4681568	A	19870721	US 1984665827	A	19841029	198731	B
			US 1986834303	A	19860227		
EP 241123	A	19871014	EP 1987301722	A	19870226	198741	E
AU 198769507	A	19870903				198742	E
ZA 198701406	A	19880826	ZA 19871406	A	19870226	198848	E
EP 241123	B	19910109	EP 1987301722	A	19870226	199103	E
DE 3767196	G	19910214				199108	E
ES 2020264	B	19910801				199135	E
CA 1288755	C	19910910				199141	E

Priority Applications (no., kind, date): US 1984665827 A 19841029; US 1986834303 A 19860227

Alerting Abstract ...The rotation clamp has an inner collar fixed to the shaft and rotatable in an outer collar fixed to the clamp, and at least one locking element associated with the inner but not the outer collar in one position and with both in a second position locking the collars together. The element...

20/7/17 (Item 1 from file: 347)

JAPIO

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07503597 **Image available**

LINEAR ACTUATOR

Pub. No.: 2002-372117 [JP 2002372117 A]

Published: December 26, 2002 (20021226)

Inventor: SOMEYA KAZUYUKI

Applicant: ORIENTAL MOTOR CO LTD

Application No.: 2001-179743 [JP 2001179743]

Filed: June 14, 2001 (20010614)

ABSTRACT

PROBLEM TO BE SOLVED: To prevent looseness of a lock nut for fixing a thrust radial bearing and to reduce size and cost.

SOLUTION: This linear actuator is provided with a screw shaft 13 for output coaxially passing through a hollow rotary shaft 3 of a motor part 1, a screw nut 15 which is located within the hollow rotary shaft 3, is screwed onto the screw shaft 13 for output and is provided with a flange part 15a projecting in the radial outside direction from one opening end of the hollow rotary shaft 3 and the thrust radial bearing 9 for supporting the hollow rotary shaft 3 at the one opening end side. The thrust radial bearing 9 is fixed by the lock nut 11 screwed onto an outer peripheral surface of the hollow rotary shaft 3. The flange part 15a of the screw nut 15 is fixed to the lock nut 11 with a bolt 17. The flange part 15a of the screw nut 15 is allowed to abut on the one opening end of the hollow rotary shaft 3 and space is provided between the flange part 15a and the lock nut 11.

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20/7/18 (Item 2 from file: 347)

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06838164 **Image available**

LINEAR ACTUATOR

Pub. No.: 2001-065658 [JP 2001065658 A]
Published: March 16, 2001 (20010316)
Inventor: YAMAMOTO TAKESHI
TOYAO JUNICHI
Applicant: JIDOSHA DENKI KOGYO CO LTD
Application No.: 2000-024859 [JP 200024859]
Division of 11-245012 [JP 99245012]
Filed: August 31, 1999 (19990831)

ABSTRACT

PROBLEM TO BE SOLVED: To reduce the number of part items to simplify structure by enclosing an output rod, a sector and a motor in a common case in a linear actuator used for an opener for unlocking a fuel filler lid of a vehicle.

SOLUTION: When the output rod 8 is at a lock-on device C, a hole locking part 8a2 is locked into a hole of the fuel filler lid. When an open switch is operated on in this state, a worm shaft 5 is rotated by the motor 4 accommodated in the case 1 together with the output rod 8, and the output rod 8 is moved into a lock-off position against a return spring 7 through the rotation of the sector 6. At this time, a case colliding part 9c of a damper 9 collides with a damper receiving part 2j1 of a center plate 2j to absorb the impact of the output rod 8. With the movement of the output rod 8, the hole locking part 8a2 comes off the hole of the fuel filler lid, and the filler lid is opened.

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11/26/2 (Item 2 from file: 350)

Derwent WPIX

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0014264287 Drawing available

WPI Acc no: 2004-450630/200442

Impeller for froth floatation cell type for separation of components from slurry comprises hub and spoke formation(s)

11/26/3 (Item 3 from file: 350)

Derwent WPIX

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0010587793 Drawing available

WPI Acc no: 2001-192895/200120

Exercise machine for exercising the body has seats, a rectangular bar, a massaging device, a massage plate, a tipping rod, and a cushion

11/26/4 (Item 4 from file: 350)

Derwent WPIX

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0007997078 Drawing available

WPI Acc no: 1997-089067/199709

Folding wheel chair with two side supports each with drive wheel and runner wheel - has two arms linked to side supports and hinged together and locked by lug and catch

11/26/5 (Item 5 from file: 350)

Derwent WPIX

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0005810680 Drawing available

WPI Acc no: 1992-034043/199205

Means of securing impeller blade hubs to a drive shaft - comprises locking rings screwed onto the hubs and locked using flexible keys wedged into tapered bores of locking rings using pins

18/26/4 (Item 4 from file: 350)

Derwent WPIX

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0014212427 Drawing available

WPI Acc no: 2004-398149/200437

Oscillator apparatus for sorting out pieces of lumber, has oscillator assembly being mounted to base assembly with leg units and elongated side units interconnected to oscillate table assembly

18/26/5 (Item 5 from file: 350)

Derwent WPIX

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0010936447 Drawing available

WPI Acc no: 2001-558771/200163

Electric hand drill for inserting fixing element for bone fracture has, drive shaft and drill wire chuck clamping fixing element rotated about parallel offset axes

18/26/7 (Item 7 from file: 350)

Derwent WPIX

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0010155192 Drawing available

WPI Acc no: 2000-463995/200040

Detachable basket assembly for golf carts, has wire basket mounted to side portion of supporting bracket by inserting elongated leg of handle which is oriented at acute angle into lock bracket

18/26/8 (Item 8 from file: 350)

Derwent WPIX

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0009681203 Drawing available

WPI Acc no: 1999-026000/199903

Drilling tool for boring out channels in bones - comprises bore head connected to flexible drive shaft, where shaft has central helical bore for removing cuttings

18/26/9 (Item 9 from file: 350)

Derwent WPIX

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0009368281 Drawing available

WPI Acc no: 1999-301929/199925

Self-threading suture anchor assembly for suturing soft tissue to bone

18/26/11 (Item 11 from file: 350)

Derwent WPIX

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0008704164 Drawing available

WPI Acc no: 1998-244516/199822

Hand held wire driving tool for fracture bone treatment - has head case and handle which are assembled mutually in T- shape, to accommodate rotation and driving shafts, respectively which are engaged mutually in right angled state

18/26/12 (Item 12 from file: 350)

Derwent WPIX

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0007874109 Drawing available

WPI Acc no: 1996-505177/199650

High speed rotary bone cutter - has elongated housing with cutting head attached to distal end of drive shaft

18/26/18 (Item 18 from file: 350)

Derwent WPIX

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0003641074

WPI Acc no: 1986-081186/198612

Self-propelled recreational vehicle - has elongate seat-leg rest, with foot or hand drive and castor wheels

18/26/19 (Item 19 from file: 350)

Derwent WPIX

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0002060670

WPI Acc no: 1980-J0113C/198037

Hip bone tissue cutter - has plate with slots which accommodate cutting element cylindrical protrusion